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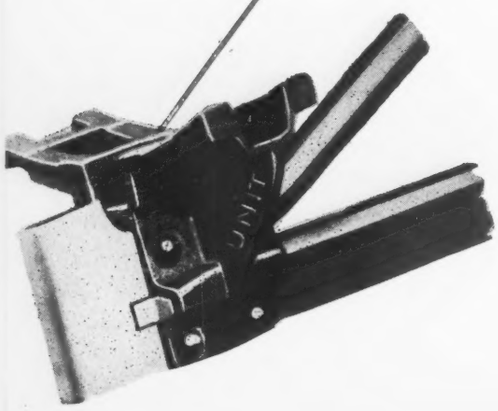

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RAILWAY AGE

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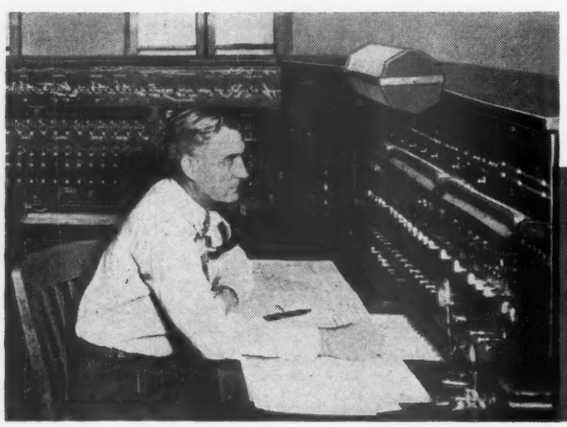

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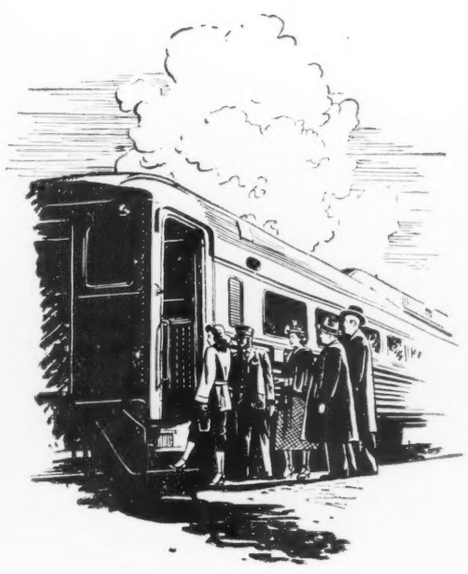
WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, eight months	
1952	$6,810,999,610
1951	6,764,406,068
Operating expenses, eight months	
1952	$5,298,347,702
1951	5,345,357,749
Taxes, eight months	
1952	$ 782,437,887
1951	754,296,780
Net railway operating income, eight months	
1952	$ 611,327,838
1951	527,579,745
Net income, estimated, eight months	
1952	$ 405,000,000
1951	339,000,000
Average price railroad stocks	
October 21, 1952	62.11
October 23, 1951	54.66
Car loadings, revenue freight	
41 weeks, 1952	29,711,848
41 weeks, 1951	32,071,139
Average daily freight car surplus	
October 18, 1952	2,429
October 20, 1951	2,889
Average daily freight car shortage	
October 18, 1952	13,955
October 20, 1951	18,899
Freight cars delivered	
September 1952	3,762
September 1951	8,533
Freight cars on order	
October 1, 1952	95,377
October 1, 1951	140,135
Freight cars held for repairs	
October 1, 1952	104,283
October 1, 1951	97,176
Average number of railroad employees	
Mid-September 1952	1,233,638
Mid-September 1951	1,286,658



In This Issue . . .

SOME OF THE EARLIEST PICTURES, and some of the first technical details, to reach this country concerning that new German development—roadside-controlled trains straddling elevated rails—are published on pages 14 and 15. Named for the Swedish industrialist who is said to have originated the basic idea and to be its principal financial supporter, the "Alweg" system is claimed to be capable of safely and economically attaining speeds of 200 m.p.h.

TOMORROW, October 28, has been designated as the date for the official opening of the country's newest railroad line—the Burlington's "Centennial cut-off" between Kansas City and Chicago.

DRAMATIC CRITICISM is, for obvious reasons, beyond the normal scope of a publication like *Railway Age*. But we cannot, this week, refrain from thanking and congratulating the Western Maryland for the imagination, the skill, and the public spirit which it displayed in staging—and staging brilliantly—a re-enactment of President Abraham Lincoln's historic visit to Gettysburg, Pa., in 1863. Only the most meticulous planning and the most scrupulous attention to detail could have brought off so successfully such a difficult undertaking. Hearty congratulations, too, to Actor Ray Middleton, whose rendition of Lincoln's immortal words must surely have been, save only the original, the finest ever given.

THE FIRST YARD to boast of a single machine to include control of automatic switching as well as of retarders has been placed in service by the Reading at Rutherford, Pa. The yard is described, with special reference to its General Railway Signal Company control equipment, in the article beginning on page 52.

A NEW TYPE of maintenance-of-way organization seems to be producing strikingly successful results for the Frisco. Basic idea, as outlined in the page 48 feature article, is to replace many small section gangs with a few fairly good-sized and pretty well mechanized "district" gangs.

In Washington . . .

SIGNIFICANT FIGURES on several different aspects of rates, traffic, and revenues, as included in the latest "Monthly Comment" of the I.C.C.'s

WEEK AT A GLANCE

Bureau of Transport Economics and Statistics, form the basis for a number of news articles in this issue. One is a table showing average overall increases in railroad freight rates since June 30, 1946. Another shows that the railroads' share of total intercity ton-miles fell off very slightly—from 58.8 per cent to 58.6 per cent—between 1950 and 1951, while the truckers' share fell a little more sharply. A third gives some rather startling statistics on average ages of railroad cars.

THE INEVITABLE RESULT of last summer's prolonged steel strike—a vicious circle of delayed freight-car deliveries because of lack of steel and of delayed steel deliveries because of lack of freight cars—are made plainly evident in the latest monthly review of "The National Transportation Situation," by Arthur H. Gass, chairman of the A.A.R.'s Car Service Division. Mr. Gass' comments are summarized in the news columns, as is an independent, but closely coinciding, statement by car builders.

. . . And Elsewhere

RECOMMENDATIONS "HELPFUL" TO THE RAILROADS are expected to be forthcoming in a report on railroad passenger losses which a committee of eight state commissioners is likely to submit to representatives of all or most of the state regulatory bodies at the annual meeting of the National Association of Railroad and Utilities Commissioners in Little Rock, Ark., starting November 10. In the making of the report, it is understood, the committee takes careful note of much of the material on deficit trains submitted to it by a group of railroad accounting officers whose mission was assigned to it at the specific request of the utility commissioners. It is believed that, among other things, the committee will advise fellow state regulators to be more realistic in allowing railroads freedom to experiment with fares—either upward or downward; to be more liberal in authorizing service curtailments; and to substitute a more useful final appraisal of the passenger deficit than that accruing under the I.C.C. formula.

SHORT-HAUL PASSENGER CARRIAGE, whether transit or commuter, faces pretty much the same problems, originating in the same fundamental causes, in all the country's large cities. Responsibility for solving those problems lies jointly with regulatory bodies, the public, and the operators, says O. A. Smith (above), who, as *president of Los Angeles' giant Pacific Electric system, faces those problems in especially acute and complex form. His observations on the subject, worthy of careful consideration by the many other railroad executives who face similar problems, are included in the general survey of PE operations and history which begins on page 43.*

"IT IS ONE OF THE FOIBLES of human nature that an individual who owns an automobile is unwilling to base the cost of travel on full costs. That is to say, include the cost of maintenance, depreciation, insurance, upkeep and the like in computing the cost of a single trip. The automobilist prefers to believe the cost of gasoline, oil and parking represents the entire cost of a journey."—From an address by J. P. Newell, vice-president —operation of the Pennsylvania, before the New York Railroad Club.

TARIFF SIMPLIFICATION AND IMPROVEMENTS resulting from the cooperative work of the Tariff Simplification Committee of the National Industrial Traffic League, the Railroads Tariff Research Group, and the railroads themselves are beginning to appear in print. However, all the changes which have so far been approved—which are numerous—will be slow to appear because of the inevitable time lag between approval of a new method or technique, adapting it to actual compilation work, and, finally getting it into print. At a recent meeting held in Chicago between members of the N.I.T.L. committee, the railroads, and the railroads' publishing agents—the third such meeting held during the past 18 months—further recommended practices and procedures were adopted. The fourth such meeting will probably be held next March at some point on the Pacific Coast.

Five Rail Chiefs Address Convention —But All Without Being There

Railway magazine editors explore a new convention technique with considerable success at Santa Fe meeting

Electronics and photography have been teamed—perhaps for the first time—to allow outstanding speakers to address a convention they cannot personally attend.

The American Railway Magazine Editors Association — the "company magazine" producers—in planning their 30th annual meeting at Santa Fe, N.M., October 13-15, asked five railroad presidents to speak to them on the subject "If I Were Editor." Aware that personal attendance at so distant a meeting was impractical, the editors arranged for each president to pre-record his message on tape. And to complete the effect of a "personal appearance," a photograph of each man was mounted on a projection slide.

Thus, through the medium of a locally rented tape recorder and slide projector set up in the Santa Fe meeting room, John Barriger of the Chicago, Indianapolis & Louisville; R. B. White of the Baltimore & Ohio; P. W. Johnston of the Erie; F. B. Whitman of the Western Pacific; and T. D. Beven of the Elgin, Joliet & Eastern—all of whom were at least 1,000 miles away—made an important contribution to the editors' meeting.

Among these "speakers" there was complete agreement as to the importance of railroad "house organs." As Mr. Barriger put it: "Permanent solution of the railway problem requires a larger measure of public and employee confidence than these carriers possess today. Good public relations—like good manners and good character—are a matter of training, indoctrination and friendly cooperation. Your magazines cultivate the conditions in which these characteristics flourish. You are as vital a component of modern railroading as the diesel locomotive."

The others posed the editors' challenge specifically: "There is far too great a gap in understanding between front-line management and rank-and-file workers" (Mr. Whitman); "If you could somehow imbue the two million or more railroaders, and their families, with the zeal to take an active, personal interest in helping their industry win this battle for public understanding, you will have indeed served your railroads well" (Mr. White); "It is your job to keep our employees informed so they can intelligently tell the railroad story to as many people as possible" (Mr. Johnston); "And it follows that we must *guide* our people to a safer life as well" (Mr. Beven).

In their search for ways to do a more effective job, the editors also heard talks from representatives of the public relations, publishing and educational fields. Wesley Izzard, editor and publisher of the Amarillo (Tex.) Daily News, said he was "bitterly disappointed that so little has been accomplished in tearing down the barriers between management, labor and the public." He cited, from personal experience, the reluctance of railway labor groups to accept any press, other than their own, as "friendly." He suggested that company magazine editors can inspire more confidence if they are free to travel and thus keep in touch with employee thinking all over the railroad. The romantic appeal of railroading should not be overlooked as a selling tool for both employees and the public, he added.

K. C. Ingram, assistant to president, Southern Pacific, and author of "Winning Your Way with People," stressed the need for fast coverage of company news developments as the best way to boost employee confidence in management. "The best way to combat malicious switch shanty gossip is for management to have no secrets," he said.

"Management—unlike labor and the general public—has no 'vote' to cast. Yet, unlike railroad management of even 20 years ago, today's brass hats must devote much of their time to dealing with the government and with our changing economy," said Dr. L. C. Lockley, dean of the School of Commerce of the University of Southern California. This new phenomenon tends to render obsolete the "yard clerk to president" tradition, he said, because abilities beyond "railroading" are now required for top management. He urged that because "where there is no public opinion, pressure groups govern," the railroad industry must arm its management with a fundamental knowledge of economics and begin filtering it to their employees and the public. Toward this end, he told the editors, the na-

tion's colleges and universities stand ready to help.

Hugh Lee Fitts, editor of the Missouri Pacific Magazine, succeeded Virginia Tanner, editor of the Baltimore & Ohio Magazine, as president of the association.

Other officers elected were: C. A. Somerville, editor of the Boston & Maine Magazine—first vice-president; William B. Grumley, editor of the Nickel Plate Magazine — second vice-president; T. J. Zirbes, editor, Rock Island News Digest—secretary; and H. F. Tate, advertising agent. Missouri-Kansas-Texas—treasurer.

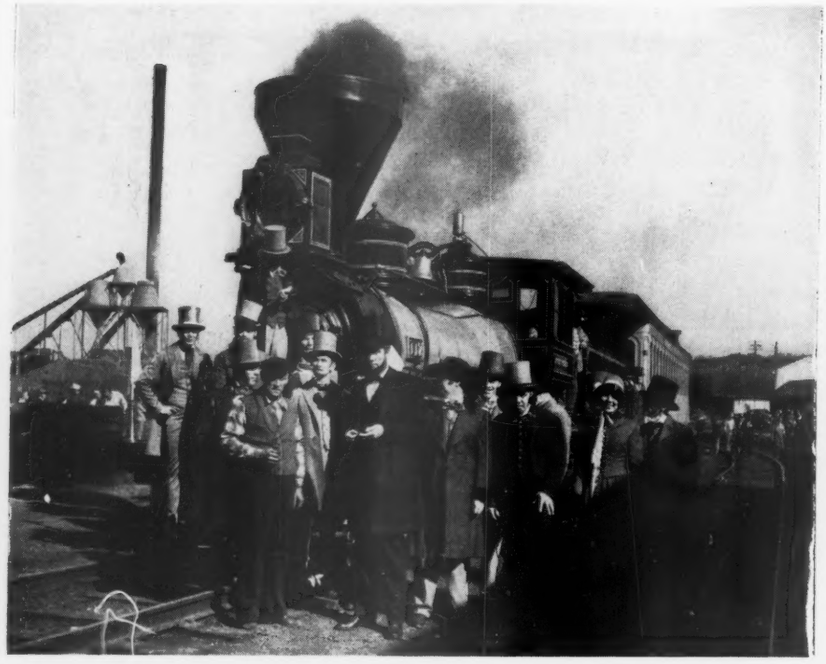
How 1950 Traffic Paid Overhead Costs

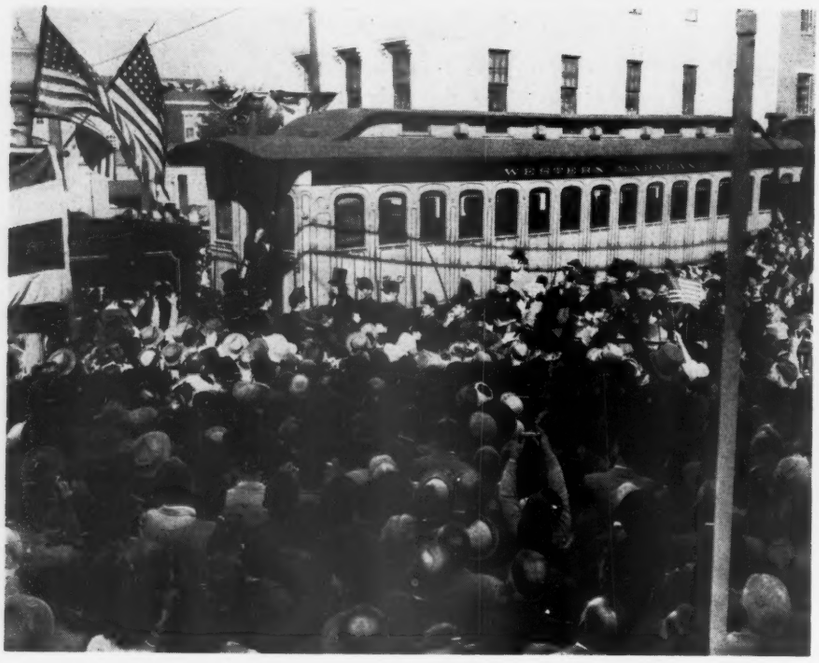
The Manufacturers and Miscellaneous commodity group in 1950 accounted for only 36.7 per cent of all carload revenue ton-miles, but contributed 64.4 per cent toward payment of the railroads' "overhead burden." This is shown in a study released by the Bureau of Accounts and Cost Finding of the I.C.C.

The M. and M. group led all others as a contributor to 1950 overhead payments. Second largest contributor to the overhead fund was the Products of Mines group. Its contribution was 17 per cent, although it accounted for 37.4 per cent of revenue ton-miles.

As to other commodity groups, Products of Agriculture contributed 10.7 per cent to overhead payments and accounted for 13.7 per cent of the ton-miles; Products of Forests, 5.9 per cent and 9.8 per cent, respectively; and Animals and Products, 2 per cent and 2.4 per cent.

Issued as Statement No. 3-52, this study is entitled, Distribution of the





"Mr. Lincoln Goes To Gettysburg"

As the climax of its centennial year (*Railway Age*, May 12, page 53), the Western Maryland on October 18 re-enacted one of the unique events in its hundred-year long history—the 1863 journey of President Abraham Lincoln to Gettysburg, Pa., to dedicate the national cemetery there—a journey made in part over the Hanover Branch and Gettysburg Railroads, predecessor lines of the WM.

The re-enactment, with Actor Ray Middleton impersonating President Lincoln, was divided into four parts—Lincoln's arrival at Gettysburg station on November 18, 1863; his talk to the people of Gettysburg from his room in the Wills house that evening; the parade to the cemetery for the dedication on the following day; and an abbreviated version of the ceremonies there, with Lincoln's address, however, being delivered in full by Mr. Middleton.

The pageant was directed by Adele

(Left, above) Ray Middleton, impersonating President Abraham Lincoln (in center, wearing top hat) poses with a group of other pageant participants, representing Secretary of State William H. Seward, state governors and other historic personages, who accompanied Lincoln on his original trip to Gettysburg in 1863. Herman Oberender, engineer of the "Thatcher Perkins," is the second man on Mr. Middleton's right.

(Left) The re-enactment of Lincoln's arrival at Gettysburg station was witnessed by part of a total crowd estimated by police at from 75,000 to 85,000 people.

Rail Revenue Contribution by Commodity Groups—1950. It carries the usual disclaimer to the effect that it was issued "as information" and "has not been considered or adopted" by the commission.

The study is based on "the application of costs for the year 1950 to a one per cent waybill sample of carload traffic for the same year." A similar study was issued in August 1951, covering the year 1949 (*Railway Age*, August 27, 1951, page 31).

Purpose of the study, as stated in the introduction, is to provide a comparison of carload revenues and costs by commodity classes and groups. It indicates, generally, the extent by which revenue earned by each class or group exceeded the estimated out-of-pocket costs of handling the traffic.

That portion of 1950 traffic which was reflected in the one per cent waybill sample yielded revenues of $70,378,000. This exceeded out-of-pocket costs by $25,554,000. The latter figure, referred to as the "revenue contribution," compared with $23,300,000 in 1949.

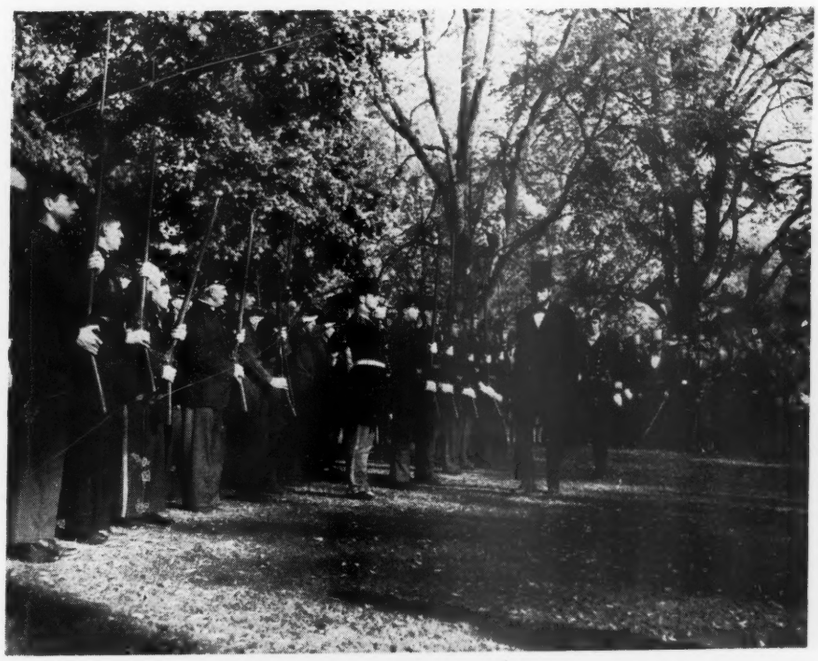
A table comparing revenues to out-of-pocket costs was contained in the study. It showed that each of the five commodity groups had 1950 revenues exceeding out-of-pocket costs. Best showing was by the M. and M. group, where revenues exceeded out-of-pocket costs by 89 per cent. For the other groups, revenues exceeded out-of-pocket costs by amounts ranging from 25 to 41 per cent.

The study also compared the revenue contribution of each group with its "apportioned overhead burden." The latter was determined by apportioning overhead costs on a ton and ton-mile basis—"without regard for ability to pay on the part of the various commodity classes."

Gutman Nathan, who staged "The Fair of the Iron Horse" for the Baltimore & Ohio some 25 years ago. It was accompanied by a running narrative written by Marc Connelly from a scenario by Mrs. Nathan, and delivered by Ben Grauer over loudspeakers placed at appropriate points.

Most of the participants were citizens of the town of Gettysburg or students of Gettysburg College, plus the Baltimore & Ohio Railroad Chorus, which sang in the second and fourth scenes. The B&O's historic locomotive, the "Thatcher Perkins," and three accompanying cars of the mid-nineteenth century era were loaned to the WM for the occasion by the B&O. along with Herman Oberender, the "Perkins'" colorful engineman, who brought the historic train into the Gettysburg station under its own steam.

Pennsylvania state police estimated the total attendance at all parts of the pageant at between 75,000 and 85,000 people; the number at the cemetery was estimated at 30,000—approximately double the number said to have been on hand for Lincoln's original address.

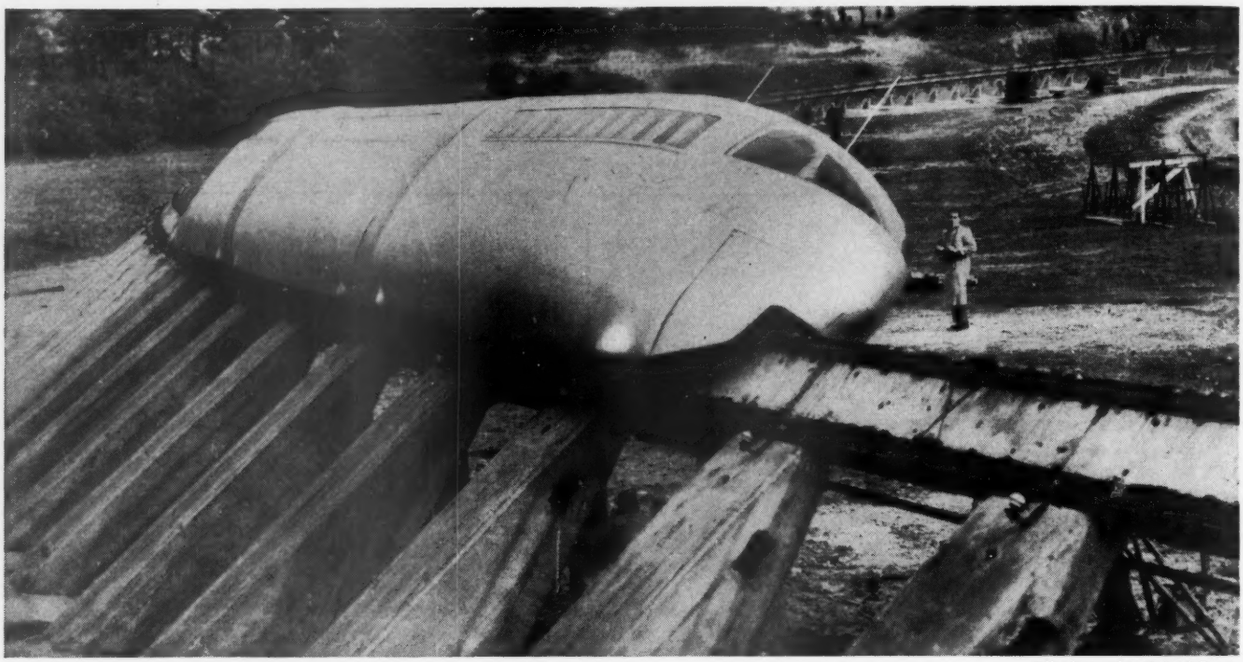


(Right, above) Scene three of the pageant, depicting President Lincoln's arrival at the national cemetery. showed him walking in front of an honor guard of Northern soldiers, impersonated by students of Gettysburg College, with appropriately costumed citizens of Gettysburg in the background. This part of the reenactment was staged as close as was physically possible to the exact spot where Lincoln spoke 89 years ago.

(Right) Mr. Middleton's rendition of President Lincoln's Gettysburg address, in the concluding scene of the pageant, was heard on the spot by an estimated 30,000 persons.

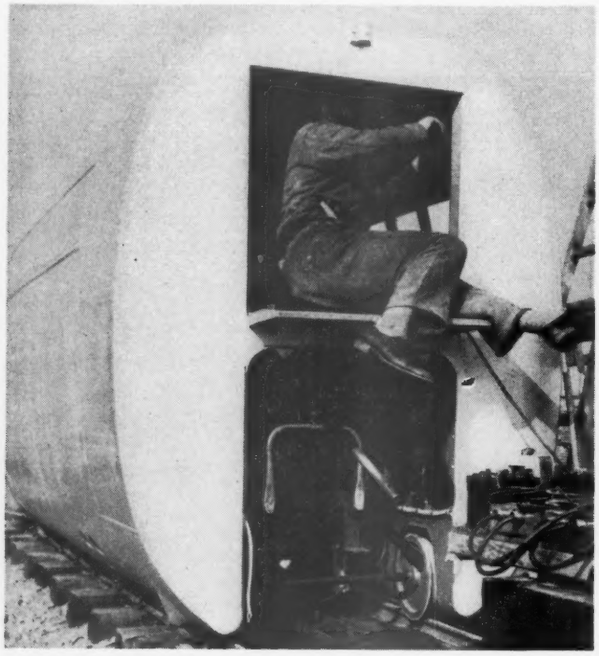
Monorail Trains, Operated from Roadside, May Attain Speed of 200 M.P.H.

The "Alweg" system of monorail transportation, the initial demonstration of which was announced in the Week at a Glance page of the October 13 *Railway Age*, comprises a track made up of a reinforced concrete supporting beam, carried on a single row of concrete columns, and vehicles which ride on roller-bearing wheels on a single rail on the top of the beam. These vehicles are stabilized by wheels in the sides of the car, which extend down over the track supporting beam; these wheels bear against rails along the top

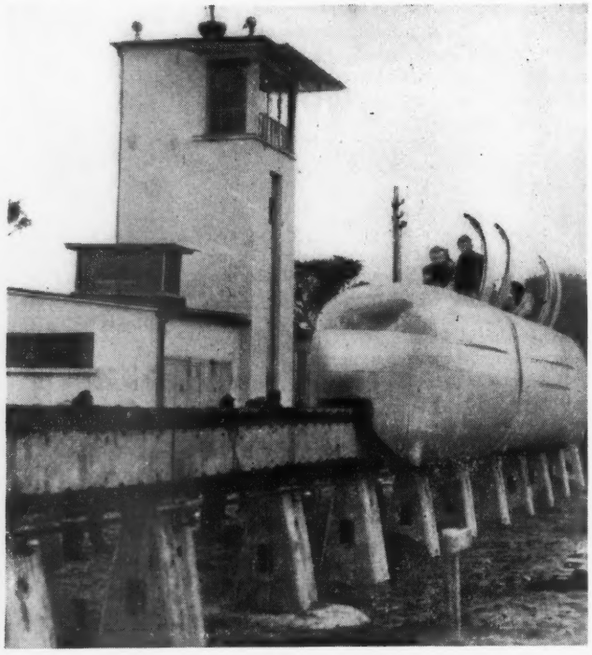


All photos by United Press

General view of the two-fifths size "Alweg" monorail system—also dubbed the "Skyroad"—recently demonstrated in Germany. Development of the novel transport system is attributed to a group of German railway, automobile and aircraft engineers, organized as the "Transportation Research Company." The basic idea, however, is said to have been originated by Dr. Axel L. Wenner-Gren, Swedish industrialist and financier, from whose name the term "Alweg" is derived. Dr. Wenner-Gren is also reported to be the principal financial backer of the project.



Upper parts of cars provide accommodations for passengers; the lower portions house operating mechanism and luggage compartments.



All movements of the train are reportedly controlled from towers like the one shown here. Model cars are entered, as shown, from the top.

and bottom of the sides of the beam. Power is collected from insulated rails supported from the sides of the beam below the lower stabilizing rails.

The idea embodied in the Alweg system came from the Swedish industrialist, Dr. Axel L. Wenner-Gren. It was developed in Germany by a group of engineers organized as the Verkehrsbahn Studiengesellschaft (Transportation Research Company) the staff of which includes engineers formerly connected with the aircraft, automotive and railroad industries. The installation now being demonstrated is a two-fifths scale model and is set up at Fuehlinger Heide, near Cologne. The track, which is a reinforced beam about 10 in. wide, is in a mile-long oval banked to 45 deg. in the curves. On this line the model, consisting of three units, has attained an average speed of 90 m.p.h.

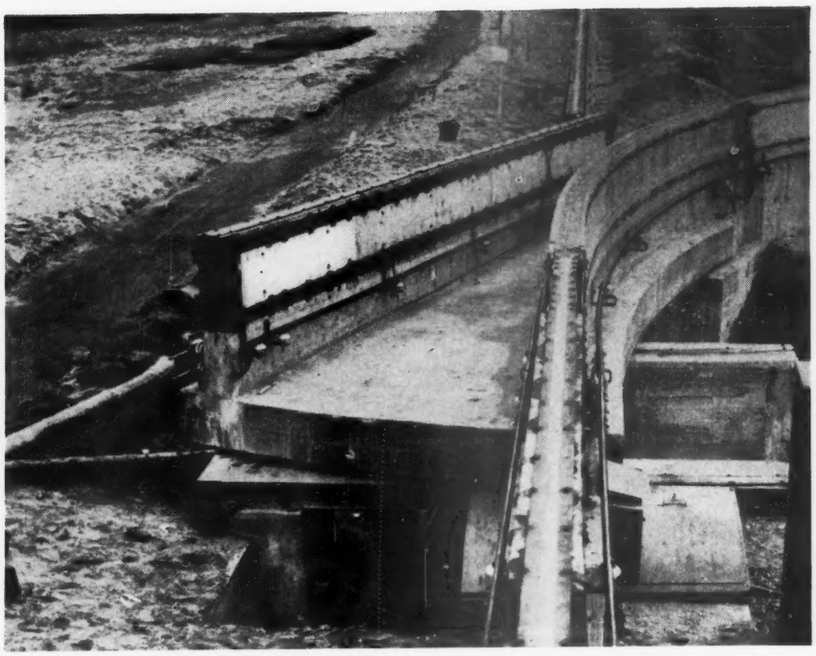
Fast Acceleration

On full-scale installations on long-distance operation the trains are expected to attain speeds of close to 200 m.p.h. These installations will consist of supporting columns of reinforced concrete 16 ft. or more high and spaced from 40 to 50 ft. apart. The entire weight of the vehicles is available for traction, and power will be such that accelerations of 3 m.p.h. per second may be attained. The units are carried on trucks, one at each end. In the inner frame are mounted the supporting wheels, which are also the driving wheels. This inner frame is connected to an outer frame through springs and the latter, which carries the wheels that bear against the stabilizing rails on the sides of the track-supporting beam, is connected rigidly to the vehicle body. There are no flanges on the carrying wheels. To permit transfer to standard-gage two-rail tracks, for operation at reduced speed, the Alweg units are also fitted with conventional flanged wheels.

The trains are controlled from the roadside, rather than from a cab on the train. These roadside controls automatically regulate the differential speed of successive trains as a function of the distance between trains. This is expected to permit a much closer spacing of trains than is possible with the conventional block system.

Among the advantages which developers of the Alweg system believe it possesses are: (1) absence of flange wear; (2) all weight is adhesive weight; (3) the track structure imposes practically no limitations on speed; (4) there are no crossings at grade with other channels of surface transportation, either highway or rail, and (5) greater safety. Power requirements are expected to be much lower than those of surface transportation on two-rail tracks, partly because of the absence of ground effect in creating turbulence in the air under a moving train. Compared with the power required to move an ordinary passenger train with accommodations for 800 passengers at 100 m.p.h., with a power consumption of 4,000 hp., the Alweg is expected to be able to move the same number at the same speed with not more than 580 hp., and it would move them at 200 m.p.h. with 3,000 hp.

The company is said now to be undertaking work on the first full-scale version of the system.



Switching mechanism on the one-rail test track is pictured here in position to force the train to turn to the right. Wheels, built into a deep slot on the undersides of engines and coaches, ride on a single rail on the top of a beam supported above the ground on concrete pillars. Electric current for driving the engines is transmitted along insulated rails on the beam.

Railroads' Share of Intercity Ton-Miles Was 58.6 Per Cent in 1951

The railroads' share of total intercity freight traffic, as measured by ton-miles, was 58.6 per cent in 1951 as compared with 58.8 per cent in 1950. Meanwhile, the truckers' share was also down slightly—11.9 per cent, as compared with 1950's 12.4 per cent.

These comparisons, with like figures for other agencies of transportation, are set out in the accompanying table which is reproduced from the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The bureau's discussion of the showings recalled that the largest rail share of the 1939-1951 period was 72.8 per cent in the war year 1943. The truckers' 1950 share of 12.4 per cent and the pipe lines' 1951 share of 13.6 per cent were peaks for those carriers.

VOLUME OF INTERCITY FREIGHT TRAFFIC IN TON-MILES BY KINDS OF TRANSPORTATION, YEARS 1950-1951

Transport agency	Ton-miles (billions) 1950	Ton-miles (billions) 1951[1]	Per cent of increase, 1951 over 1950	Per cent of annual total 1950	Per cent of annual total 1951
Railways, steam and electric, incl. mail and express	596.9	655.4	9.8	58.8	58.6
Highways, for hire and private trucks	126.0	133.2	5.7	12.4	11.9
Inland waterways, incl. Great Lakes	163.3	178.0	9.0	16.1	15.9
Pipe lines (oil)	129.2	152.1	17.7	12.7	13.6
Airways (domestic revenue service, incl. express and mail)	.3	.4	[2]22.7	[3]	[3]
Grand total	1015.7	1119.1	10.2	100.0	100.0

[1] Preliminary estimates.
[2] Airway ton-miles used in computing percentage totaled 378 million in 1951, and 308 million in 1950.
[3] Represents about .03 of one percent in 1950, and .03 of one percent in 1951.

ESTIMATES OF AVERAGE OVERALL INCREASES IN RAILROAD FREIGHT RATES AUTHORIZED SINCE JUNE 30, 1946

I.C.C. Docket No.	Date of report	Effective date of increase	Per cent of increase over—Rates in effect immediately prior to increase: United States	East. Dist.	Poca. Reg.	Sou. Reg.	West. Dist.	Per cent of increase over—Rates in effect on June 30, 1946—Cumulative: United States	East. Dist.	Poca. Reg.	Sou. Reg.	West. Dist.
1	2	3	4	5	6	7	8	9	10	11	12	13
Ex Parte 148-162	6-20-46	7- 1-46	6.5	7.0	7.0	4.9	4.9	6.5	7.0	7.0	4.9	4.9
Ex Parte 148-162	12- 5-46	1- 1-47	10.4	10.2	10.2	11.9	11.9	17.6	17.9	17.9	17.4	17.4
Ex Parte 166	10- 6-47	10-13-47	8.9	8.5	6.4	9.2	9.4	28.1	28.0	25.5	28.2	28.5
Ex Parte 166	12-29-47	1- 5-48	7.6	7.6	5.5	8.0	8.0	37.8	37.6	32.4	38.5	38.8
Ex Parte 166	4-13-48	5- 6-48	3.6	5.5	4.3	3.7	1.7	42.8	45.2	38.0	43.5	41.1
Ex Parte 166	7-27-48	8-21-48	1.0	1.1	3.0	0.3	0.2	44.2	46.8	42.1	44.0	41.3
Cumulative effect of Ex Parte 166	—	—	22.6	24.5	20.5	22.6	20.4	..	..	..	..	..
Ex Parte 168	12-29-48	1-11-49	5.2	5.8	5.9	5.7	4.2	51.7	55.3	50.5	52.2	47.3
Ex Parte 168	8- 2-49	9- 1-49	3.7	3.7	3.7	3.7	3.6	57.3	61.1	56.0	57.8	52.6
Cumulative effect of Ex Parte 168	—	—	9.1	9.7	9.8	9.6	8.0	..	..	..	..	..
Ex Parte 175	3-12-51	4- 4-51	2.4	3.0	2.5	2.0	1.9	61.1	66.0	60.0	60.8	55.5
Ex Parte 175	8- 2-51	8-28-51	4.0	4.3	4.1	3.8	3.8	67.6	73.1	66.6	67.0	61.5
Ex Parte 175	4-11-52	5- 2-52	6.8	5.9	5.8	7.6	7.5	78.9	83.4	76.2	79.6	73.6
Cumulative effect of Ex Parte 175	—	—	13.8	13.8	12.9	13.9	13.8	..	..	..	..	..

— From the October 17, 1952, issue of "Monthly Comment," published by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

Gondola Car Shortages Slow Steel Deliveries

Gondola car shortages in all sections of the country are holding up deliveries of steel at a time when steel shortages have forced many carbuilding plants to close down or curtail their production. This was reported by Arthur H. Gass, chairman of the Car Service Division of the Association of American Railroads, in his latest issue of "The National Transportation Situation."

Reviewing the car supply situation, Mr. Gass said "a considerable tonnage of steel has been piled at a number of furnaces awaiting cars." Elsewhere in his report, the C.S.D. chairman said steel shortages in September caused new freight car deliveries to drop to 3,762 for the month (*Railway Age*, October 20, page 17).

Severe gondola shortages are further aggravated by the need for such cars to handle heavy movements of building and road construction materials before cold weather, Mr. Gass said.

As to hopper cars, Mr. Gass said demands "continue heavy." Meanwhile, requirements for plain flats are "steadily increasing." Covered hoppers seem to be in the best relative position, with no serious shortages being reported.

Box car requirements "are presently exceeding the available supply in every section of the country," Mr. Gass continued. All classes of box cars are in demand, with "no surpluses indicated anywhere." The chairman added, however, that this situation is not unusual at this season because of heavy agricultural and miscellaneous commodity loadings.

November box car demands are expected to be "slightly" below those for October, with a further decline in December, Mr. Gass said. Present shortages are "evenly divided among the various districts," making it unnecessary to issue special car orders to readjust distribution, he continued. "Informal" car distribution orders have been issued from time to time as relief for roads having "substantially less" than their ownership available to to them.

Turning to his comments on equipment, Mr. Gass said statistics for September "present about as dreary a picture as they did in August."

New car installations by Class I roads and their car-line affiliates amounted to 3,450 cars in September, while retirements continued at close to the 6,000 level, Mr. Gass reported. This resulted in a loss in car ownership "for the third successive month." This decline totals nearly 7,000 cars since July 1, erasing all but 5,000 of the gain made in the first half of the year. Further losses in October and November "are not unlikely," Mr. Gass added.

Despite material shortages, the railroads managed to accomplish a reduction in bad order cars during September. The C.S.D. chairman said this reduction was enough to offset the loss in ownership for the month, and even to raise serviceable ownership slightly. But serviceable ownership today is only about 9,000 cars greater than it was a year ago, he said.

Freight car detention reports from railroad agents in 745 cities showed that cars detained beyond the free time of 48 hours averaged 16.22 per cent in September. That compared with an average of 16.34 per cent in August, while in September of last year the average was 14.72 per cent. The detention figure for the first nine months of this year was 16.41 per cent.

Section 20c Now Applies To Non-Railroad Obligors

Division 1 of the Interstate Commerce Commission has now determined that the Interstate Commerce Act's new section 20c does contemplate recording with the commission of equipment trusts on equipment operated on railroads where others than railroads are lessees or obligors. By an order dated October 8, the division amended accordingly the commission's rules and regulations covering section 20c procedures.

Section 20c was enacted this year. It sets up arrangements for filing with the commission, for recording purposes, of any equipment trust agreement or other instrument evidencing the mortgage, lease, conditional sale, or bailment of railroad rolling stock. The procedural rules, as originally issued, contemplated filings by railroad obligors only. (*Railway Age*, September 29, page 64.)

McCoy Becomes Director Of N.P.A. Railroad Unit

Verl E. McCoy, chief purchasing officer of the Chicago, Milwaukee, St. Paul & Pacific, has been named director of the Railroad Equipment Division, National Production Authority.

Mr. McCoy succeeds Richard W. Rogers, who resigned recently to return to his position as chief mechanical officer, Seaboard Air Line.

The new N.P.A. official joined the Milwaukee in November 1950 as assistant to vice-president—finance. He became chief purchasing officer in September 1951. Before joining the Milwaukee, Mr. McCoy was in the railroad supply trade for 20 years and is a member of several associations in that field.

Westinghouse to Build Rail-Mounted Gas Turbine

The U.S. Army Corps of Engineers has awarded to the Westinghouse Electric Corporation a contract in excess of $1 million for construction of a railway-mounted gas turbine power plant. Intended to be used as an advanee power generation unit in devastated areas, the plant will be contained in two non-self-propelled railway cars.

The generator car will contain a 5,000-kw., 5,700-r.p.m. gas turbine designed to burn diesel oil; a geared speed-reducer to drive the generator at 3,600 r.p.m. for 60-cycle power, or at 3,000 r.p.m. for 50-cycle power, a 2,400-volt a.c. generator; the generator

exciter; and a starting motor for the gas turbine.

The other car, known as the transformer-control car, will house a multi-voltage transformer, with output ranging from 2,400 volts to 15,000 volts; high- and low-voltage switchgear; and two diesel-engine generators for auxiliary power, one of which will supply the starting motor.

The cars will be subcontracted to the Puget Sound Bridge & Dredging Co. of Seattle, where apparatus will be installed and tested.

Freight Car Loadings

Loadings of revenue freight in the week ended October 18 totaled 838,377 cars, the Association of American Railroads announced on October 23. This was a decrease of 4,336 cars, or 0.5 per cent, compared with the previous week; a decrease of 48,271 cars, or 5.4 per cent, compared with the corresponding week last year; and a decrease of 52,853 cars, or 5.9 per cent. compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended October 11 totaled 842,713 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, October 11

District	1952	1951	1950
Eastern	140,956	140,405	148,678
Allegheny	161,504	170,664	174,476
Pocahontas	56,484	66,769	66,125
Southern	130,614	134,596	138,549
Northwestern	146,569	144,278	150,007
Central Western	140,277	144,916	144,298
Southwestern	66,309	67,055	66,756
Total Western Districts	353,155	356,249	361,061
Total All Roads	842,713	868,683	888,889
Commodities:			
Grain and grain products	55,007	54,484	55,369
Livestock	17,040	18,933	17,247
Coal	134,205	160,411	163,786
Coke	14,788	16,003	16,273
Forest products	41,305	48,525	49,073
Ore	88,985	78,904	77,253
Merchandise l.c.l.	75,694	75,868	88,953
Miscellaneous	415,689	415,555	420,935
October 11	842,713	868,683	888,889
October 4	851,866	858,757	863,903
September 27	862,061	864,575	880,186
September 20	873,559	863,690	870,529
September 13	881,218	850,812	866,658
Cumulative total 41 weeks	29,711,848	32,071,139	30,251,651

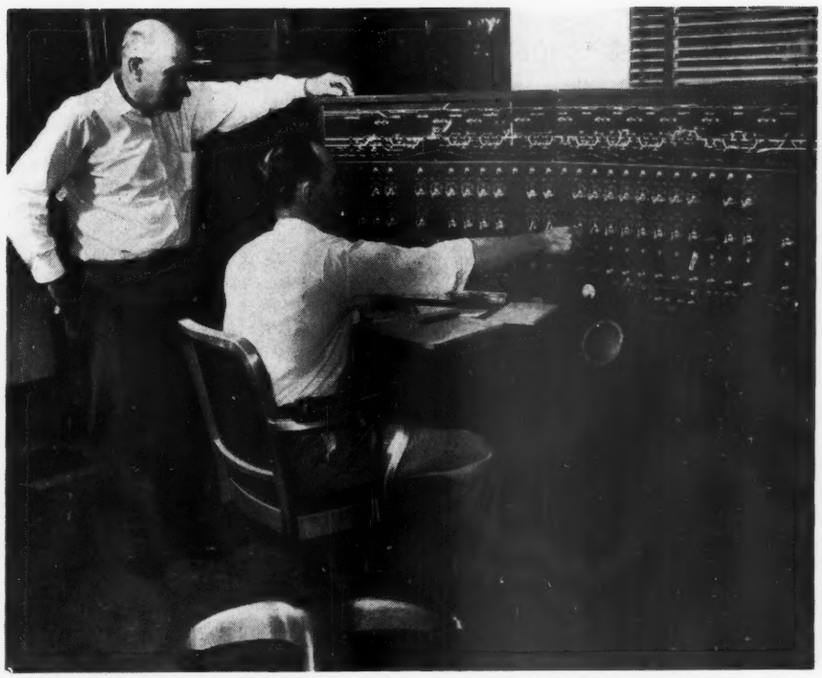
August Employment

Railroad employment increased 3.11 per cent—from 1,182,485 to 1,219,257—between mid-July and mid-August, according to the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The mid-August total was six per cent below that of August 1951.

The index of employment, based on the 1935-1939 average as 100, was estimated at 117 for August, compared with 113.5 for July and 124.5 for August of last year.

August employment was above that of July in all groups. The increases ranged from 0.51 per cent in the group embracing executives, officials and staff assistants to 5.85 per cent in the maintenance of equipment and stores group.

Meanwhile, August employment was below that of the same 1951 month in all groups except that embracing executives, officials and staff assistants, which was up 1.15 per cent. The decreases ranged from 1.44 per cent in the "professional, clerical and general" group to 9.1 per cent in the maintenance of equipment and stores group.



WITH THE FLIP OF A LEVER, Dispatcher J. D. Miley handles a train movement on Union Pacific's centralized traffic control board at Marysville, Kan. Looking on is S. S. Harle, assistant signal engineer in charge of the centralized traffic control project, which, when completed, will increase, by 80 per cent, the efficiency of this key 222-mile single track line which extends from Topeka, Kan., to Gibbon, Neb.

CB&Q to Open "Centennial Cutoff" on October 28

The Chicago, Burlington & Quincy will open its new Chicago-Kansas City cutoff on October 28. The new shorter route will permit freight schedules between those cities to be cut by from two and one-half to six hours. Train No. 77, the Burlington's premier freight train between the two cities, will, according to the road, "provide a service which is second to none." A general description of the new route, known as the "Centennial cutoff," appeared in *Railway Age* July 15, 1950, page 28.

"Norfolk & Western Week" To Be Observed in Roanoke

The week of October 26 to November 1 has been designated "Norfolk & Western Week" by Mayor Roy L. Webber of Roanoke, Va. November 1, Mayor Webber pointed out, will be the 100th anniversary of the arrival of the first train in Roanoke, then Big Lick. The centennial will be climaxed on November 1 by a banquet at which former Governor William Tuck will be principal speaker. N&W President R. H. Smith also will speak at the dinner, which is being sponsored jointly by the Roanoke Chamber of Commerce, the Roanoke Merchants' Association and the Roanoke Area Manufacturers Association. These organizations will present a bronze plaque to the railroad at an afternoon ceremony on the same day in the passenger station.

Railroad Cars Still Growing Old

More than half of all freight cars in service on Class I railroads at the beginning of this year were over 20 years old, an age which had also been attained by more than three-fourths of the passenger-train cars. The "over 20" portions of the two fleets were 51.01 per cent and 77.87 per cent, respectively.

This was shown by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission in the latest issue of its "Monthly Comment." The bureau's figures were based on data compiled by the American Railway Car Institute.

They showed that only 19.93 per cent of the freight cars, and only 9.19 per cent of the passenger-train cars, were less than six years old as of last January 1. The "6-to-10" groups in-

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended October 18 were announced by the Association of American Railroads on October 23 as follows:

	Surplus	Shortage
Plain Box	18	8,181
Auto Box	0	116
Total Box	18	8,297
Gondola	535	3,427
Hopper	234	1,489
Covered Hopper	0	163
Stock	82	359
Flat	14	212
Refrigerator	1,041	0
Other	505	8
Total	2,429	13,955

cluded another 11.43 per cent of the freight cars and another 5 per cent of the passenger-train cars.

The figures also showed that 16.8 per cent of the freight cars and 38.07 per cent of the passenger-train cars were over 30 years old. The bureau calculated that the average age of all freight cars was 19.17 years, while the average age of passenger-train cars was 26.8 years.

Group Economy Fares Extended to Year-End

The trial period for reduced round-trip coach fares for small groups and families, which were put into effect by Eastern railroads last June 25 (*Railway Age*, June 16, page 12), has been extended to the end of the year. The lower fares originally had been scheduled to expire late in October.

Testimonial Luncheon Held for W. E. Hayghe

William E. Hayghe, who will retire October 31 from the directorship of the Traffic Management Division, Federal Supply Service, General Services Administration, was guest of honor at a testimonial luncheon at Washington's Mayflower Hotel on October 14.

The toastmaster was Jess Larson, administrator of G.S.A., and speakers included C. Guy White, district freight agent of the Chesapeake & Ohio, who was chairman of the luncheon committee, and E. F. Lacey, executive secretary of the National Industrial Traffic League.

Grand Trunk Lake Michigan Car Ferry Service Resumes

Cross-lake car ferry service between Muskegon Heights, Mich. and Milwaukee, Wis., via the Grand Trunk-Pennsylvania car ferries was resumed on October 23 following settlement of a 3½-month strike called by the Great Lakes Licensed Officers organization, which halted all Great Lakes railroad car ferry service commencing last July 4. Resumption of Ann Arbor service across Lake Michigan and of Wabash ferry service at Detroit on September 21 was announced in *Railway Age* September 29, page 58. At press time for this issue, the strike against the Chesapeake & Ohio car ferry service was still in effect.

A spokesman for the Grand Trunk said the company, along with the C&O, had dismissed some of the striking officers for having left their ships without permission. The Grand Trunk has agreed to reinstate the dismissed members, and the men have agreed to submit their dispute over wages, working rules, and a demand for a union shop, to arbitration.

Shoemaker Urges Business Leaders Help RR "Crusade"

Support of business leaders for the crusade of the railroad industry to equalize regulation of transportation at national and state levels was urged by Perry M. Shoemaker, president of the Lackawanna, in an address before the annual meeting of the Elmira, N. Y., chamber of commerce on October 21. Mr. Shoemaker advocated equality of regulation of the various agencies of transportation as "the means of stabilizing the economy and preserving our traditional free enterprise system."

"The present chaos in transportation regulation, and its very real threat of socialization," the Lackawanna chief executive said, "stands as a challenge to the statesmanship of American business. Responsibility for action rests primarily upon business leadership in this important matter and I believe early forthcoming events will challenge that same business leadership to stand up and be heard on the economic salvation of our country."

Car Builders Attribute Low Output to Short Rations

Freight car builders attribute the growing lag in the production of new cars to the government's failure to concede the industry's essentiality to the national economy and defense effort, the insufficiency of steel allotments, and the difficulty of cashing at steel mills the current quarter's Controlled Materials Plan tickets.

This position of the builders was reported in an October 15 statement issued by the National Production Authority after special meetings of its Railroad Contract Car Builders Industry Advisory Committee and Railroad Industry Advisory Committee. Members of the former committee were reported to have denied that there has been any "deliberate slowing down of their production efforts to spread their order boards."

The railroad committee urged that supplementary priority and allocation assistance be provided so that carbuilding can be restored to a normal rate and approach or achieve its programmed production goals. N.P.A. representatives at the meeting were reported to have given assurances that this and other recommendations to relieve the situation would be "submitted to top executives of N.P.A. for action."

Discussions at the meetings indicated the adverse effect of the steel strike. Current operations of the carbuilders were estimated at from 50 to 80 per cent of capacity, due chiefly to shortages of structurals, wide plates, heavy castings and center sills. N.P.A. representatives estimated that production of approximately 30,000 freight cars was lost as a result of the steel strike.

Representatives of the builders attributed the slow pace of new orders to the fact that deliveries are not being made on some orders which are two years old. "New orders now appear to be geared to actual production and during the third quarter of 1952 slightly exceeded production," the N.P.A. statement also said.

Nyrop Quits as Chairman Of C.A.B. on November 1

Donald W. Nyrop, chairman of the Civil Aeronautics Board since May 1951, has resigned effective November 1. Oswald Ryan, vice-chairman of C.A.B., has been designated by President Truman to head the agency for the remainder of 1952.

The President wrote Mr. Nyrop to express regret at the latter's resignation. He said Mr. Nyrop's period of service with C.A.B., and with the Civil Aeronautics Administration, has been one of "significant forward development in aviation." Mr. Nyrop was administrator of the C.A.A. for eight months before joining the C.A.B.

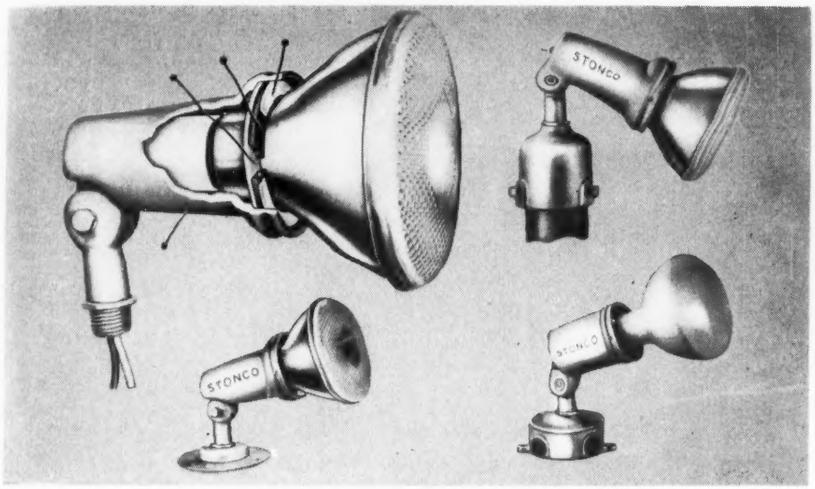
I.C.C. Calls for Report On Source of Rail Funds

Class I railroads, excluding switching and terminal companies, have been called upon by the Interstate Commerce Commission to file, as a special report, a "Statement of Source and Application of Funds During the Year 1951."

The call was embodied in a proposed order, dated September 30, which will become final unless the commission modifies it after consideration of presentations it may receive from interested parties. Such presentations are due within 30 days after September 30.

The form on which the special report is to be made was issued with the proposed order and made a part of it. There are 36 items in the form's "source of funds" section, while the "application of funds" part has 30 items.

Weatherproof Mount for Reflector Lamps



A weatherproof lamp holder for reflector type lamps has been developed by the Stonco Electric Products Company, Kenilworth, N. J. It is called the Stonco Cushion-Seal Holder and makes use of a high-temperature, silicon rubber cushion-seal that hugs the neck of the lamp in a weatherproof seal, that is said to withstand the highest temperature to which the lamp may be subjected in outdoor service. By sealing the lamp low at its neck, and by exposing its hot spot area to open air cooling, lamps are reported to burn cooler and exceed rated lamp life. The cushion-seal adapts itself to fit all R-40 and PAR-38 lamps, whether long, short or off-center. It also helps protect the lamp against vibration and shock.

The unit is made of non-corrosive cast aluminum with a glazed porcelain heatproof socket. The silicon cushion-seal is backed with an impregnated asbestos heat barrier and locked in place by a rigid aluminum reinforcing disc. The unit is furnished completely wired with lead wires extending beyond a universally adjustable swivel arm for mounting to ½-in. pipe, wall bracket, pipe slip fitter, or any of a number of standard interchangeable splice box accessories. It carries U.L. approval for use with medium base or mogul reflector lamps in the standard 150-, 200-, 300- and 500-watt sizes.

Machine Dispenses Seven Food Items

An automatic food dispenser, capable of dispensing as many as seven different food items, is being marketed by the Lunch-O-Mat Corporation of America, 2112 Broadway, New York 23. The Lunch-O-Mat is manually operated, electrically refrigerated, and equipped with radar instant heating for preparing hot foods. The seven compartments of the machine will hold:

30 containers of homogenized milk;

30 containers of chocolate milk;

50 hot sandwiches (25 of each of two kinds);

50 Cold sandwiches (25 of each of two kinds);

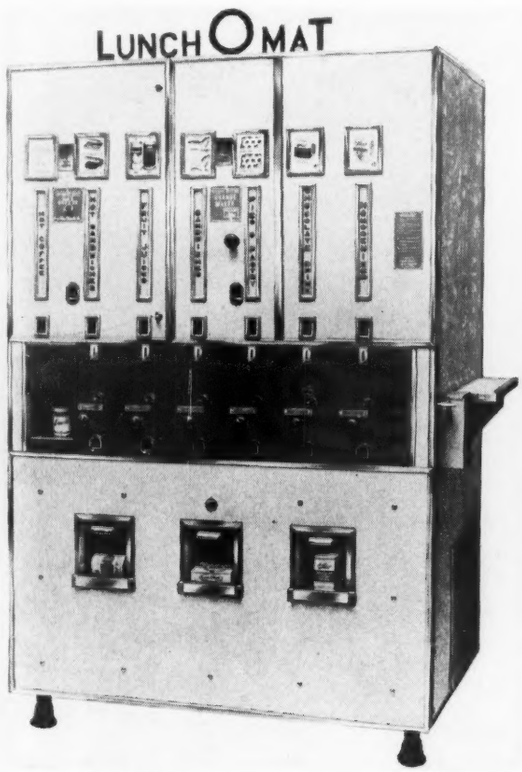
50 pies and pastries (25 of each);

88 cans of juice (44 cans of each of two kinds); and

150 cups of hot coffee (made instantaneously upon insertion of coin).

All divisions are interchangeable except coffee, so that the most popular products sold locally may occupy more than one of the compartments of the machine.

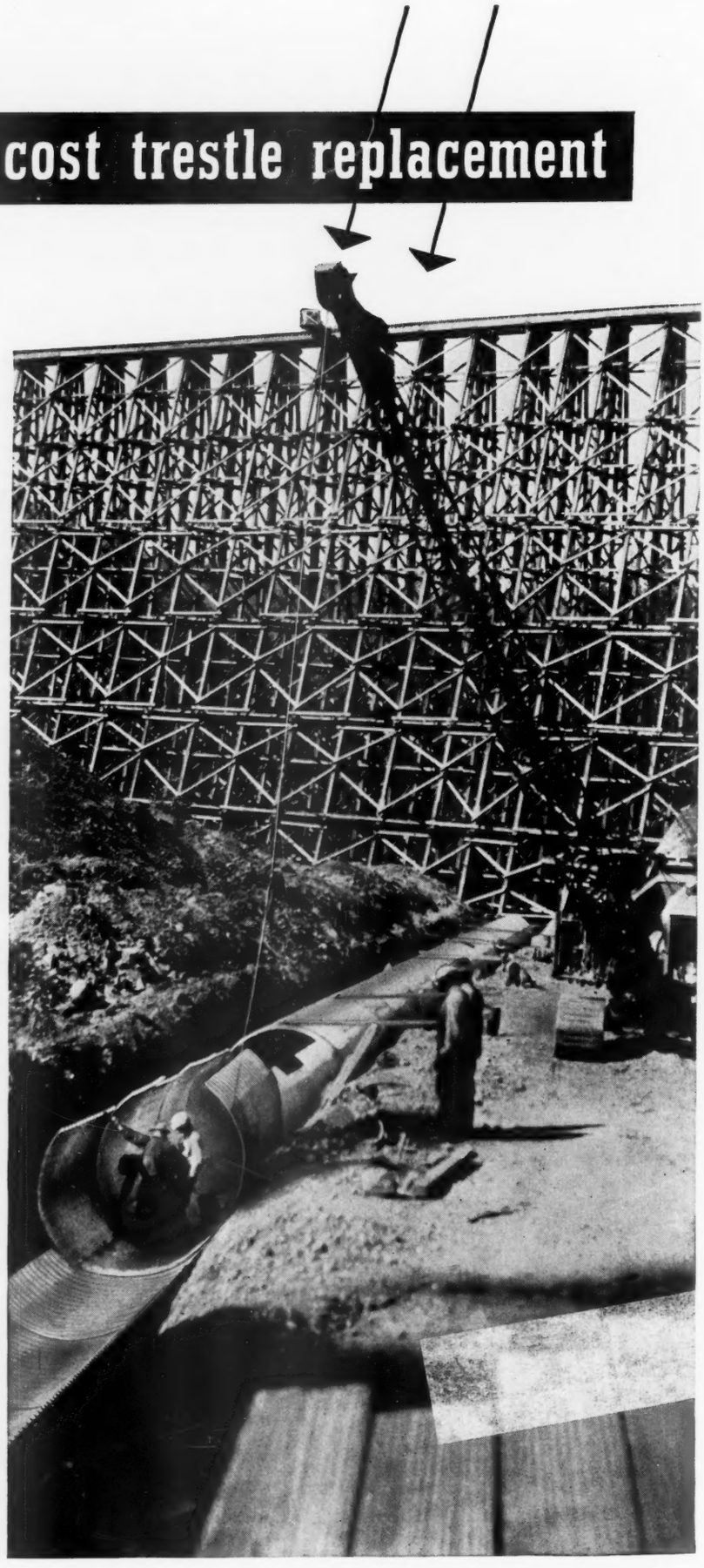
There is a manually operated changemaker, giving two dimes and a nickel for a quarter. Products retailing at 10, 11, 12, 15, 30, 35, or 50 cents can be accommodated.



The Lunch-O-Mat cabinet measures 48 in. wide, 31½ in. deep and 72 in. high. On the right of the cabinet are a change-maker and a condiment tray.

Recently announced by Lewis-Shepard, Watertown, Mass., is the Spacemaster model "M" electric fork truck, said to be about half the usual weight of a regular electric fork truck. The truck, which can right-angle stack in six-foot aisles, is manufactured in three types: straddle; open face pallet; and platform. It features, among other things, four points of support under the load (not including the drive wheel). It is available in 3,000- and 4,000-lb. capacities.

Here's a low-cost trestle replacement



When tired trestles play havoc with maintenance budgets the simple solution is to replace them quickly and economically with Armco MULTI-PLATE Structures.

Both purchasing agents and engineers like MULTI-PLATE because of its low cost, strength, durability and ease of installation. Individual, pre-curved sections are easily transported, ready for quick assembly by unskilled crews. Backfilling follows immediately because there's no formwork or delay for curing.

Armco MULTI-PLATE Structures have ample strength to withstand heavy railroad loadings under shallow or high fills. Nearly half a century of satisfactory railroad service is assurance of their dependability, efficiency and economy.

Keep costs low by specifying Armco MULTI-PLATE Pipe or PIPE-ARCH to replace old structures or for new construction. Write for complete data and also ask about other money-saving Armco railroad products. Armco Drainage & Metal Products, Inc., 2202 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation. Export: The Armco International Corporation.

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Official Facts, Figures, Photos and Maps of Every Class I Railroad in the U. S.

HANDBOOK
of
AMERICAN RAILROADS

by ROBERT G. LEWIS

Transportation Editor, *Railway Age*

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NOT MANY RAILROADS, fortunately for them, are involved in providing suburban passenger service. Those that do provide it have their troubles—which are particularly acute in the case of the Long Lsland Rail Road, where the through passenger and freight service are not the dominant part of the business that they are elsewhere.

The situation of the Long Island has been discussed several times in our editorial pages. In brief, the road is being operated by a trustee, and the principal debtor (as well as the chief stockholder) is the Pennsylvania Railroad. The state of New York has set up a Long Island Transit Authority, which seeks to acquire the property at a valuation figure based on poor earnings which, in turn, stem from restrictive regulation and excessive taxation. The State of New York, in other words, is attempting to get possession of private property at a price depressed, not by any intrinsic unsoundness in the property itself, but because of disadvantages which the state itself has created.

The Pennsylvania in legitimate defense of its interest as owner and creditor, has intervened to ask the Interstate Commerce Commission to require that LI commutation fares be raised to cover the cost of the service. The Long Island Transit Authority's plan proposes tax exemption for the property if acquired by the state, but insists that relief from present excessive taxation cannot be granted if the line remains in private ownership. The people of New York are given a clear-cut choice between socialization and private ownership. As the Pennsylvania points out, "the full costs of operating the Long Island Rail Road must be paid whatever type of ownership is provided."

Is there any other position possible, under the principles of self-supporting private enterprise, than that taken by the Pennsylvania? Nevertheless, several New York newspapers, usually as able defenders as these principles have, have expressed impatience both with the Pennsylvania and with the Long Island's trustee, William Wyer—and plump for turning the property over to the Transit Authority. Socialism is socialism even if its agents are those who believe themselves to be 100 per cent Americans. This dispute is one which, before it is settled, should offer opportunities for education in transportation principles, applicable in a lot more places than in just this one segment of the Eastern Seaboard. Full hearing of the contentions of the parties at interest would offer a forum to this end.

J. G. L.

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BURDEN OF PROOF SHOULD LIE ON REGULATION, NOT ON REDUCING IT

Almost everybody who knows anything about transportation and opposes government ownership agrees that the railroads need larger and more dependable net earnings—not, primarily, in the interest of the railroads, but to enable them to attract the capital and skill required to assure continuance of satisfactory public service. Go just a step beyond this goal of railroad solvency to the various possible *means* of attaining it, however, and the "united front" quickly collapses.

Almost every articulate interest has some particularly favored method for putting the railroads soundly on their feet, usually by the sacrifice of some vested interest in the "status quo" besides its own. A highly popular sacrificial goat is the "passenger deficit"—a large but debatable part of which is a statistical abstraction, rather than a reality. But nobody doubts that there is a substantial actual deficit from this service on most railroads, which is perpetuated largely because of the reluctance or refusal of state authorities to authorize the abandonment of red-ink trains—a position in which the state authorities are strongly supported by local commercial interests and, often, by some of the railroad unions. These people have a vested interest in over-regulation in the area of retention of service, and they would prefer that the railroads' acknowledged need for larger net earnings be achieved by reducing some other phase of over-regulation, rather than this particular one which happens to be to their benefit.

Another route toward the necessary improvement in net earnings would be through lower but still profitable rates on traffic now diverted to competing means of transportation—provided parallel reductions were not required on traffic not subject to competition. Every unregulated business meets its competition in this manner—but there are many powerful vested interests in continued denial of this managerial prerogative to the railroads. This situation is so well known that everyone can think of many examples for himself—such, for instance, as the "umbrella" that the long-and-short-haul clause holds over water transportation and the long-haul trucks, contract carriers especially.

Strangely enough, many long-haul rail shippers also tend to oppose greater freedom to the railroads in the area of lower competitive rates for shorter hauls since these, at first glance, seem to favor the short-haul producers at the expense of those with longer hauls to market. Actually, this objection can usually be invalidated by evidence that the short-haul producers *already* are enjoying this market advantage by using highway or water transportation. If the railroads could retrieve a substantial volume of this traffic at compensatory rates, the upward pressure on rates on long-haul traffic which still is rail-borne would be less severe. Too often the railroads do not possess the available concrete evidence to sustain their argument and, when they do not, the objection is carried by default.

Hasn't the approach to the solution of "the railroad problem," so far, been, on the whole, unduly conservative: an effort to find out how few of the shackles on the railroads must be taken off to permit the industry to survive? What kind of "private enterprise" philosophy or "market-place economics" is this anyhow? The transportation business, today, is just as much subject to competition as any other major industry—and, indeed, to a lot more than most of them. The question to be asked about the railroads oughtn't to be, as it usually is, that of removing from them the least possible minimum of their regulatory handicaps, but instead: "Just what minimum degree of regulation does the public interest still require to prevent flagrant abuses in this once monopolistic but now highly competitive industry?"

A railroad traffic officer of wide experience summarizes the railroads' regulatory problem as follows:

> "Right after the war, we had about all the volume we could handle, except in passenger service, and still the financial return was poor because the overall rate level was inadequate. Increased volume is desirable but, by itself, is no cure-all. We need freedom to make rates that will move the traffic, without being subjected to prolonged delay—and freedom from having such voluntary reductions held over our heads by the regulators as 'revenue dissipation,' which they are not, when we seek general increases to offset inflationary rises in costs."

What the railroads need, in short, is freedom—period. Not as little freedom as possible to permit them to live,

but all the freedom they can be given without injury to the public interest. A serious handicap that the railroads suffer in persuading their customers that they need and deserve such freedom is that every concern which buys transportation has at least one man who knows about all there is to know market-wise about the railroad business—whereas the railroads have few people who are comparably expert in the business of most of their customers.

What negotiator ever fails to improve his position as such by getting all the information legitimately obtainable about the situation of those with whom he is negotiating? And where has there ever been a participant in negotiations who, by boldly and intelligently calling for what he is entitled to, got less than he would have got by asking for only 25 or 50 per cent of what was actually justified?

If the present generation of transportation people, shippers and regulators were suddenly wiped out, and all the transportation laws were burned—not that we favor this expedient—does anyone suppose that it would ever occur to the individuals who would inherit the present physical facilities of transportation that they should re-establish in transportation the existing intricate web of arbitrary restrictions, so different from that obtaining in any other business? Tradition is a safe guide for conduct only when conditions remain unchanged—but tying an automobile to a hitching post just because the automobile's predecessor needed hitching wouldn't make much sense. A family with a single child has to invent methods of discipline and education which become superfluous and even ridiculous if the youngster is turned loose among a crowd of brothers and sisters.

WHAT ABOUT MECHANICAL REFRIGERATION?

Is comparative overall operating cost—as between ice and mechanical refrigeration—the only, or even the principal consideration which should govern in the selection of a cooling medium? Shouldn't it first be determined in just what fields mechanical refrigeration must be employed to retain business now being moved by rail, and in what fields the attraction of new business is dependent on mechanical refrigeration? So far as these fields are concerned, the role of comparative costs is probably of considerably less consequence than the traffic-attractiveness of the means of refrigeration. The question in such cases becomes one of whether the added cost, if any, of handling traffic in mechanically refrigerated cars is low enough so that the business thus retained or attracted can still be handled at a profit.

The case for the mechanically refrigerated car—in certain areas at least—offers an analogy to that for the modern "de luxe" coach. It would undoubtedly be cheaper for the railroads to handle a given number of passengers in 80- to 90-seat non-air-conditioned cars than in a typical streamliner coach with seats for about 50 persons. But the roads have found that the de luxe coach is necessary to retain the traffic, and that it has been instrumental in building up business. Where that happens, the greater expense of the traffic-attracting equipment is not considered to be the controlling factor in the decision.

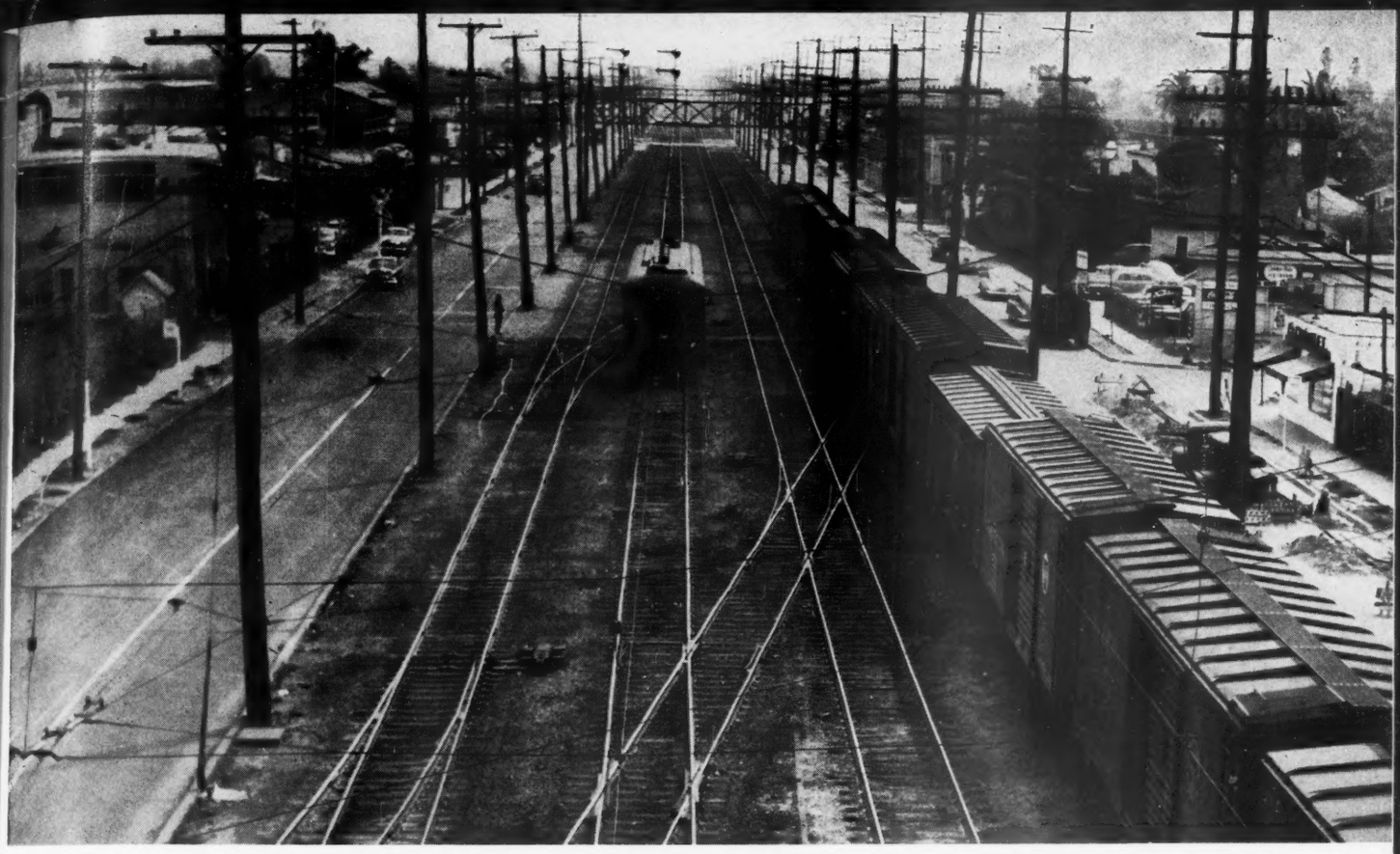
Intensity of equipment utilization is also an important factor.

The average reefer handles about 14 loads per year, of which 7½ are under refrigeration, one with heater service, and the remainder with ventilation. Is mechanical refrigeration justifiable, considering the amount of service the average car renders? Here again a parallel can be drawn with what has proved a profitable program in another item of rolling stock. Back in the late thirties and early forties a diesel locomotive was estimated to have to make some 500 miles per day to justify its greater initial cost over the steam locomotive. At the time the average daily mileage per passenger locomotive was around 200; for freight, around 100. Through selective assignments, however, the railroads were able to employ diesel power to an ever-increasing extent, resulting in more and more mass production, and, consequently, at least relatively lower prices.

Is it not reasonable to expect that similar selective assignments could be given to mechanically cooled refrigerator cars, and that purchase in larger quantities would make the price more favorable? Perhaps the opportunities for attaining higher intensity of utilization are not as great as for the diesel, but such opportunities would seem to exist to a degree sufficient to warrant greater employment of mechanical refrigeration.

Elimination or reduction of wayside icing facilities is another possible source of savings that might be expected if mechanical refrigeration should become widespread. Such benefits would, of course, not be realized until years in the future. Yet, like the elimination of scattered steam facilities with complete dieselization. these benefits may amount to more than is generally foreseen today. Ten years ago few people would have thought that the last 10 or 20 per cent of dieselization would be as profitable as it has been found to be through elimination of steam facilities.

Savings of this origin are admittedly too far in the future to be directly measurable today. So too are the savings in transit time from the elimination of icing, and the reduction in claims for spoilage that should certainly be expected. But, considered along with the potential value of mechanical refrigeration to arrest the downward trend of the railroads' share of refrigerator traffic, they add to the weight of the evidence favoring the mechanically refrigerated car.



The Pacific Electric's four-track main-line right-of-way between Los Angeles and Long Beach runs along a divided highway.

Short-Haul Passenger Service . . .

A Problem in Los Angeles, Too

Operators, regulators and public all have part to play in correcting situation common to transit and commuter lines generally, says O. A. Smith, president of 50-year-old Pacific Electric

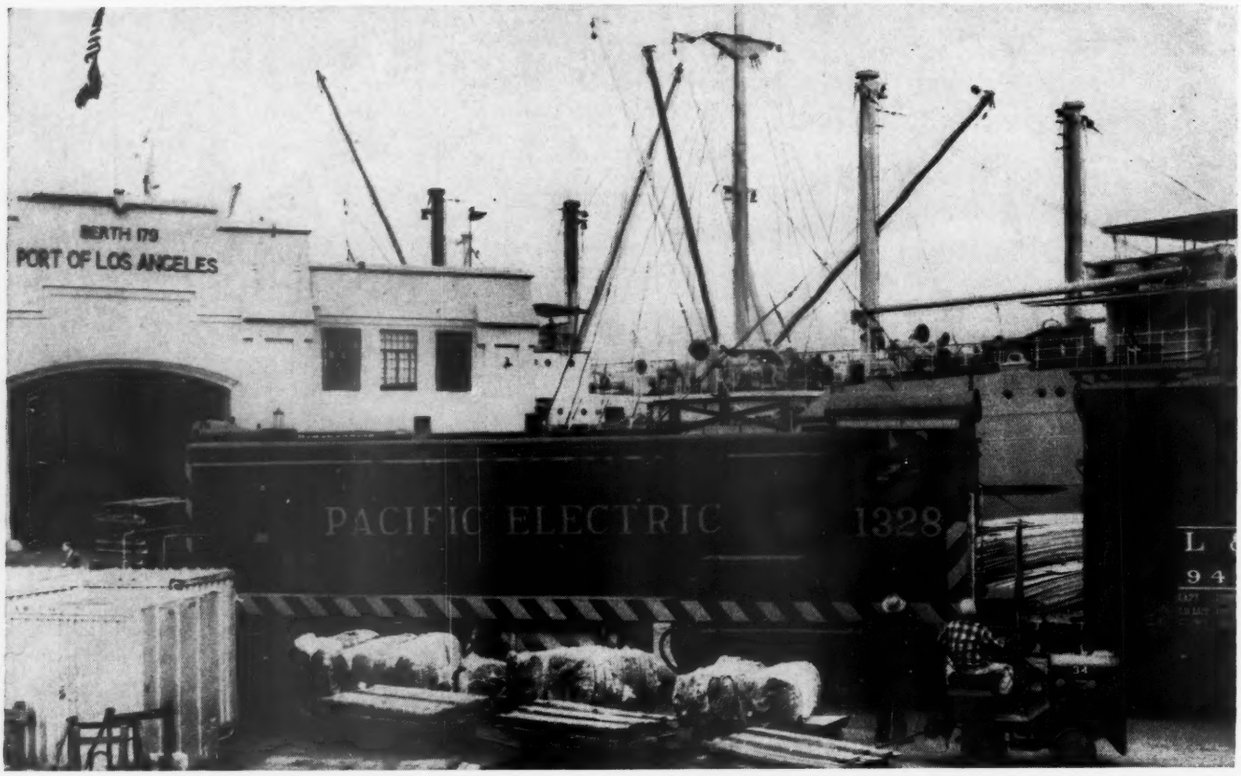
Will Los Angeles, which in 1887 became the West's first city to use rails and electric motors for transit, now become the nation's largest city yet to replace them with rubber tires and diesel engines? This appears to be the prospect at least for Los Angeles' interurban rail system, the Pacific Electric, which Henry E. Huntington built into the world's largest and one of its finest.

The basic problem of transit nationally—the vicious combination of increasing costs, excessive taxes, excessive regulation, rising fares and declining patronage—is pushing Mr. Huntington's great enterprise in that direction. If the trend continues, Los Angeles soon may be the nation's first major city to see its interurban transit system serviced entirely with motor coaches.

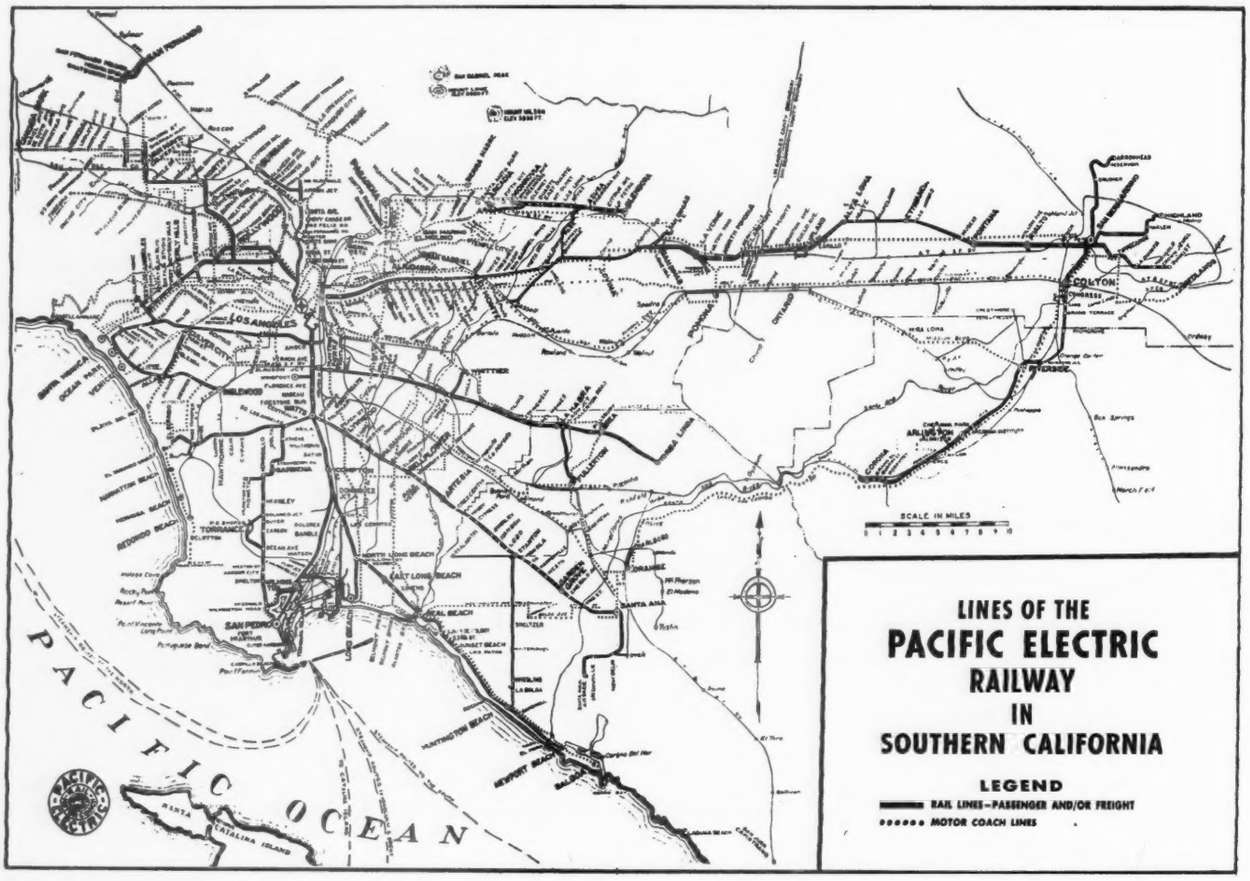
Mr. Huntington's enterprise and foresight made him one of the great figures of Southern California history, for the rail network he built was a prime factor in the amazing growth of the land of motion pictures, citrus groves and aircraft factories.

The nephew of Collis P. Huntington, of Southern Pacific fame, Henry E. Huntington accurately predicted and planned for the vast development of the area from desert to mountains to seashore. But he could not foresee the high development of the private automobile and particularly the passion for its use which Southern Californians would exhibit 25 years later. He would be startled indeed today if he could see his rail empire reduced to eight passenger rail lines, as compared to 38 motor coach lines, and the company using for passenger service only 217 miles of its total of 759 miles of standard-gage track, although the company's rail freight business, in number of cars handled, places it third among all railroads of the state.

When it is said that Pacific Electric operates an interurban transit business centered in the Los Angeles metropolitan area and spreading through four counties, it merely emphasizes the obvious to add that the company has its serious operational problems. Los Angeles presents no major exceptions to the general conditions of automobile traffic congestion, lack of parking space,



Although Pacific Electric is frequently thought of as principally an urban and interurban passenger carrier, it is also an important freight railroad—the third largest in California. It serves the twin ports of Los Angeles and Long Beach; does all switching for Long Beach Harbor, and interchanges freight with the Southern Pacific, the Union Pacific, and the Santa Fe. To serve some 900 industries by handling about 180,000 loaded freight cars annually, it maintains 56 locomotives. It is well on its way toward complete dieselization for its freight traffic.



declining transit business and need for fare increases which prevail throughout the nation.

The types of problems faced by PE therefore are not unique. The factor which makes its half-century of history vary from the typical transit story today is one of degree, for the company's problems are in some respects more acute and more complex than in the case of other operators. This is due to some peculiarities of the Los Angeles situation, including its great area, comparatively low density of population, growing decentralization of business, high per capita automobile registration combined with low number of riders per automobile, and the amazingly rapid growth of newly populated areas.

Pacific Electric is one of many transit companies in the metropolitan district, and one of two principal operations serving the central portion. Los Angeles Transit Lines provide local service in the city of Los Angeles by three types of equipment—trolley rail cars, trolley motor coaches and diesel motor coaches. At the outbound terminus of nearly every line, LATL, like PE, makes a connection with some suburban bus line. There are more than 20 such companies, most of them privately owned, and including the Asbury Rapid Transit System and the separately operated City Lines of Glendale, Pasadena, Long Beach, Culver City and Inglewood. Santa Monica Municipal Bus Lines is the largest publicly owned operation.

The city of Los Angeles, with a population exceeding 1,970,000, is sprawled over an area of 453 square miles, largest incorporated territory in the nation. By comparison, the five boroughs of New York City total 314 square miles. The county of Los Angeles has a grand total of 4,151,000 inhabitants in an area of 4,080 square miles, about the size of Connecticut. In the county are 45 incorporated cities and 108 other separate and distinct communities, some within the city of Los Angeles and some in unincorporated territory. Among the 108 are communities such as Westchester, which in 1940 had 353 residents and in the 1950 census recorded 33,459, and Lakewood, which zoomed from 1,820 to 40,605 in the same decade.

Under Los Angeles' high development of business decentralization each of these 153 cities and communities has at least one principal shopping district. Most such districts are complete enough to satisfy the shopper's every need, from a spool of thread to banking facilities to complete home furnishings. More and more residents therefore shop in the area in which they live—although those who own automobiles seem unwilling to walk even a block to the neighborhood food market. They will, instead, expend twice the energy competing for a parking space in a congested area. On the other hand, more and more take jobs which require daily travel across the city or across the county.

The result is comparatively light off-peak travel via transit to central shopping areas, but a tremendous outpouring of workers before and after working hours bound to and from offices, plants and stores in every direction. At peak periods most of Los Angeles county's 1,712,000 private automobiles are on the streets, and a recent survey showed that only about 1.5 persons ride in each auto. This means that the people in 40 automobiles could be transported in one motor coach—yet in Los Angeles the more efficient motor coach has no legal priority of movement, but must compete in a traffic stream which is better described, not as a flow, but as a stutter.

Traffic in Los Angeles apparently is going to get worse before it gets better. PE's efforts to bring about a better situation include converting operations from rail cars to motor coaches, encouraging staggered working hours and shopping by transit between 10 a.m. and 4 p.m., and campaigning for more consideration in traffic planning, including operation of motor coaches on new freeways as soon as each section is completed.

"I can offer no panacea for the Los Angeles traffic dilemma," says PE's veteran president, O. A. Smith, "but there is a great deal we can do to relieve the situation through cooperative efforts."

Sharing in the responsibility for improved conditions are the regulatory bodies, the general public and the operators, with little possibility of any material improvement without their cooperative efforts, he believes.

What the Industry Can Do

Firstly, he says, the industry itself should consider these matters:

1. Years of negative reports and overall pessimism have led the public to believe that transit service is universally inadequate, outmoded and getting worse. The fact that modern, convenient, economical service is provided on many lines and that service would be improved with greater off-peak patronage is obscured in the cloud of gloom. Transit is like any other business; it has to be sold.

2. Economy of operation, although essential, should not completely overshadow the necessity for attractive service. The value of simplified schedules, fares and transfers, comfortable vehicles and adequate loading facilities as a means of getting and keeping riders should receive full consideration.

3. The industry should launch an educational program to erase the misconception that only the poor, the elderly or the physically handicapped ride transit vehicles.

4. It should pursue an educational program stressing that there never can be enough street facilities to handle all the private automobiles, and that it therefore is essential that the movement of people be considered above the movement of vehicles. Transit is the most efficient means of moving people, which means that greater use of transit and staggered hours of employment are the best means of obtaining some immediate relief from traffic congestion.

5. The general public under established agencies should speed up pay-as-you-go freeways in Southern California by proceeding with the plan, now under discussion, of impounding future gas tax revenues. At the present rate of financing, freeways in the Los Angeles area will not be completed for 20 or 30 years. These freeways should include facilities for loading and unloading of motor coaches as a part of the freeways to be paid for from gas tax funds, a proper share of which is paid through gasoline taxes paid by bus operators.

6. The industry should vigorously promote use of transit during off-peaks Monday through Saturday. Downtown merchants and entertainment centers should find part-payment of customers' transit fares less costly than building and maintaining parking facilities and validating parking tickets. At the same time the industry should consider conditioning of the public to accept elimination of transit service on Sundays and holidays.

Thoughts for the Regulators

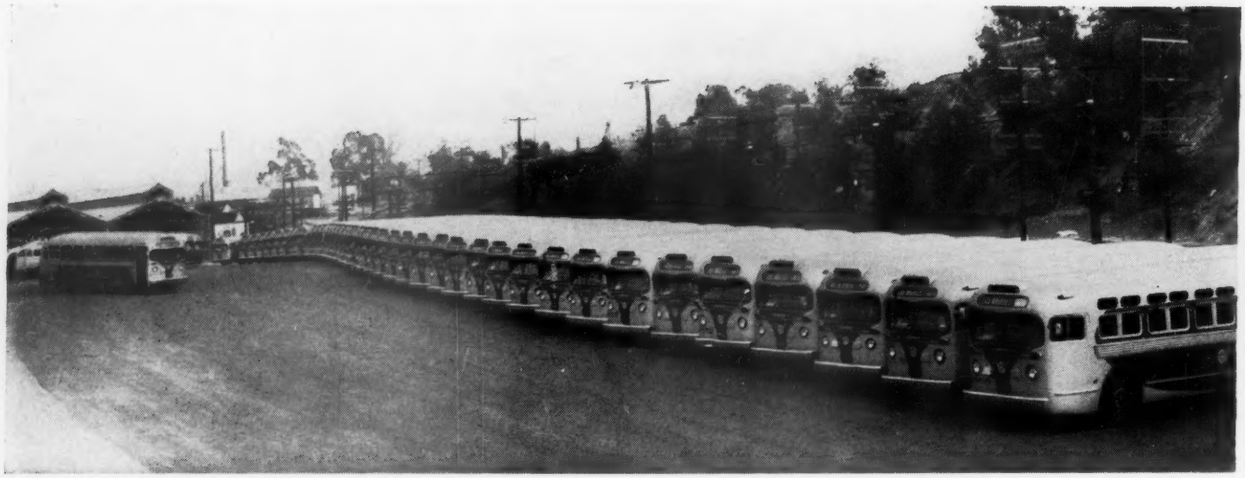
Secondly, President Smith advances these points for the consideration of regulatory commissions:

1. Make an exhaustive study of toll roads as a means of supplementing freeways.

2. Give top priority to transit vehicles on streets and freeways during rush hours, such priority to extend to restriction of appropriate downtown streets to transit during rush hours.

3. Drastically reduce or eliminate many franchise fees and burdensome taxes, most of which were imposed when public transit was a monopoly.

4. Make prompt decisions, particularly on applications



One of the objectives of PE's educational program is to encourage shopping by transit from 10 a.m. to 4 p.m. and thus reduce the size of this million-dollar midday lineup at the company's Macy Street garage.

FACTS ABOUT PACIFIC ELECTRIC

Rail mileage of system (single-track miles)	759
Mileage of system motor coach lines	1,021
Number of employees	4,700
Passengers carried in 1951	102,724,592
Motor coach-miles operated in 1951 (revenue)	21,860,729
Rail car-miles operated in 1951	7,210,006
Passenger equipment operated:	
Passenger cars	203
Motor coaches	660
Average daily passenger car-mileage:	
Rail	15,865
Motor coach	60,741
Number of scheduled trains daily from various system termini:	
Local trains	855
Interurban trains	242
Freight trains	30
Express cars (mail)	34
Total number of scheduled trains daily	1,161
Number of motor coach trips daily from various system termini:	
Local coaches	2,750
Interurban coaches	1,948
Total number of scheduled coaches daily	4,698

for fare increases and operational economies, so that spiraling costs of labor and materials may be met more promptly.

5. Effect cooperation between city, state and federal bureaus to coordinate hearing dates so that applications for necessary fare increases and other changes may not be drawn out over a period of months with the attendant excessive amount of unfavorable publicity.

The Public's Responsibility

Finally, President Smith commends these points to the consideration of the general public, and especially the automobile driver:

1. Private automobile drivers are in the majority. Unless this majority supports certain concessions to the transit industry and a voluntary program of staggered working hours to relieve traffic congestion, such a program as outlined cannot become effective.

2. Every motorist owes it to himself to check local transit schedules and see if there are trips he can make by transit as conveniently as by auto, particularly in off-peak hours. If every motorist takes the attitude of "Let the other fellow ride the bus; I'm driving my car," there is little hope of gaining much relief from traffic congestion. Most autoists drive during rush periods, and if they switch to transit use at those periods without a corresponding increase in off-peak transit use the operator will incur a larger deficit than before. The key to lower fares and better service is a better relationship between the off-peak and the peak use of transit facilities.

"I have not mentioned construction of rapid transit facilities as a solution to traffic congestion here," says Mr. Smith. "I do not think private enterprise as such can successfully finance and operate such a project in this area. There was a time when this might have been possible, but it is too late now.

"In the past 30 years Pacific Electric has supported several rapid transit plans and, as late as 1947, the construction of rapid transit rail facilities in the center of freeways. All of these plans failed due to lack of public interest.

"The most practical solution of the transit situation for the present, in my opinion, is the cooperative effort I have mentioned, with the greatest possible use of the freeways, or possibly toll roads, as completed. But if this area is to continue to grow as every sign indicates that it will, some type of rapid transit facility will be a necessity. The general public and their representatives will come fully to realize that the movement of people and not vehicles is of paramount importance.

"Just how such facilities will be provided is a subject for study, as, in my opinion, they cannot be provided by private capital as such. But possibly through some type of authority, wherein such authority would not be subject to regulation except by itself and would be relieved of taxes and franchise payments, it might be accomplished. It can be accomplished with the taxing power of the area behind it, under a plan similar to that of the Metropolitan Water District of Southern California. And this may well be necessary to secure adequate service at reasonable fares in order that public transit may take its proper place in the relief of the general traffic situation.

"Of utmost importance is that the general public and their representatives in this metropolitan area should realize they have a vital problem to solve—not only the problem as it exists today, but as it will exist in future years. Their studies and planning should be made on that basis. Eventually there should be a complete coordination between freeways, toll roads and rapid transit facilities, probably including automobile parking, and all future planning should be on that basis. There is no question but that the problem at this time is greatly accentuated because of the lack of planning or because of improper planning in the past."

In recent conversion of many lines to motor coach operation, Pacific Electric has used 2701-Class equipment.

Pacific Electric uses Presidents' Conference-type cars on its Los Angeles-Glendale-Burbank Line.

President Smith's analysis of what transit needs and is attempting to achieve in Southern California would indicate that PE is grappling with the problem—not resting on its laurels. But while the company attends to immediate problems and works to meet problems the future is sure to bring, it may be permitted a moment to recall the past.

Golden Anniversary Year

This is Pacific Electric's golden anniversary year, and PE does have a proud past well worth a backward glance. Criss-crossing through the four counties of Los Angeles, Orange, Riverside and San Bernardino, its network of rail and motor coach lines radiates from downtown Los Angeles over a wide area. Almost without exception, the older communities served date their spectacular growth from the time PE's "big red trains" first reached their sites.

The name Pacific Electric first appeared on rail cars in Los Angeles in 1899, when the city population was 102,000. This was the name of one of 72 separately owned rail lines, most of them short-lived, which sprang up from the time the first horse-car franchise was granted in 1873 until the turn of the century.

Henry E. Huntington reorganized the Pacific Electric Railway Company in 1901 by acquiring an interurban line to Pasadena and several local lines. However, PE dates its origin from 1902 because it was in that year that Huntington began construction of the Long Beach line and three other major links of the system. Most of the other major lines were built in the decade immediately following.

Then, in 1911, the world's largest unified interurban system was created by consolidation of the primary facilities—Los Angeles Pacific, Los Angeles-Redondo, Los Angeles Interurban, and Pacific Electric.

Today the company's lines extend 70 miles east to Redlands, 44 miles south to Balboa, 17 miles west to Santa Monica and 28 miles north to San Fernando. Using 660 buses and 203 passenger rail cars, PE on a typical day operates 4,700 motor coach trips and 1,100 passenger rail trips. In 1951 it carried almost 103,000,000 passengers. There are today 759 single-track miles for rail passenger and freight service.

For the 900 industries on its freight lines PE last year handled 180,000 loaded freight cars, and currently ranks as the third largest rail freight operator in California. Freight is interchanged daily with transcontinental rail carriers through PE's Butte Street and State Street yards in Los Angeles and yards in San Bernardino and Colton.

The company serves the ports of both Los Angeles and Long Beach. It does all switching for Long Beach Harbor for the three transcontinental railroads. At the Port of Los Angeles the Harbor Belt Line Railroad is the operating agency for all four lines. Equipment for the freight business includes 35 electric, gasoline-electric and steam locomotives, and 21 new diesel units recently placed in operation as a step toward complete dieselization.

Passenger motor coaches were introduced by PE in 1917, and in 1923 the company joined with the Los Angeles Railway (now Los Angeles Transit Lines) to operate the Los Angeles Motor Coach Company, which was split between the two operators in 1949. In 1930 PE bought a two-thirds interest in the Motor Transit Company, and in 1936 purchased the other one-third interest from Greyhound. These lines were wholly merged with PE operations in 1939.

The rehabilitation program of 1939-1940 further stimulated motor coach business, and bus substitutions then were made on six rail lines. During 1950-1951 a $7-million modernization program included purchase of 199 new motor coaches for further changeover from passenger rail service. Currently operating 38 motor coach lines and eight passenger rail lines, PE has just gained approval to substitute motor coaches on two more rail lines late in 1952.

The flexibility and economy of buses are bringing a substantial reduction in PE's operating costs, but the company is making little headway in its competition with the private automobile in Los Angeles. It is gaining favorable action on applications to operate on freeways, but experts predict that unless the program of building such highways is greatly stepped up new people and new autos will continue to outstrip freeway construction in Los Angeles for the next 20 years.

In the Los Angeles area the task of building enough streets to accommodate all the automobiles seems to be a hopeless one. If this is going to be the case, then transit is the only answer to traffic congestion in the West's largest city.

A "district" gang surfacing track on the Frisco near Baxter Springs, Kan. According to Mr. Anderson the new system is resulting in more work per man-hour paid for.

How Frisco Organizes for

Track Maintenance Without Section Gangs

Chief engineer describes this road's experience with a new type of organization in which the basic unit is a "district" gang for doing all except the heaviest jobs

Greater production per man per hour paid for and a high degree of fluidity of gangs in emergencies, such as derailments, washouts, slides, etc., comprise two of the principal advantages attributed by E. L. Anderson, chief engineer of the St. Louis-San Francisco, to a revolutionary type of track-maintenance organization that has come into extensive use on that road in recent years.

In the new set-up the basic element of the track-maintenance organization is a unit known as the "district" gang, and with its introduction the traditional section gang is either eliminated entirely or becomes a patrol unit confined to small odd jobs. The new type of organization has been the subject of a number of addresses by Mr. Anderson, the most recent of which was delivered at Chicago in September before the annual meeting of the Roadmasters' and Maintenance of Way Association.

Data presented by Mr. Anderson indicate that in 1950 the Frisco renewed almost as many ties as in 1947, laid more rail, and ballasted and surfaced 45 per cent more track, while at the same time effecting a reduction of 17 per cent in the number of man-hours applied to track and roadway work. The district gang set-up is one of two factors to which credit is given for this improved performance. The other is increased mechanization of maintenance-of-way work.

According to Mr. Anderson, the evolution of the district-gang set-up on the Frisco was the result of a combination of circumstances that motivated the railroad to examine with a critical eye the role and effectiveness of the old-style section gang. Among these were gradual underlying changes, occurring over a period of time, which saw the introduction of the motor car (permitting greater maneuverability of gangs), better communications, a more stabilized track structure, and a variety of power tools and machines for use by track forces. These changes, coupled with increasing costs of labor and material and faster train speeds, resulted in gradual evolution of a new and different type of maintenance, which Mr. Anderson refers to as the "pre-

Each of the "district" gangs is provided with a 1½- or 2-ton truck for getting to and from the job. Track is patroled by the assistant foreman and one to three men on a motor car.

ventive" type, as distinguished from the "corrective" type that had previously prevailed. He cites as an example of "preventive" maintenance the widespread use of means of detecting flaws in rails before failure occurs rather than waiting for failure to take place.

Another development that was a factor in introduction of the district-gang set-up on the Frisco was the severe labor shortage that occurred during World War II. Because of inability to hire sufficient men to keep section gangs to the size considered essential for effective operation, it was necessary, according to Mr. Anderson, to organize gangs at favorable locations and transport the men in trucks to parts of the line where the labor situation was bad, returning them nightly to their home stations. "This method proved very satisfactory from an employee standpoint," he said, "in that men on this type gang could live at preferred locations and incur minimum living expenses. Likewise, from an employer standpoint, there was a distinct advantage in having a dependable labor supply with minimum turnover." Further developments were described by Mr. Anderson as follows:

"As a result of this experience it was decided to supplement regular section gangs with truck-transported gangs on some portions of the line. In order to designate or distinguish these gangs from the ordinary extra gangs, they were called 'district' gangs. Those gangs were not assigned to a definite territory other than that under a roadmaster's supervision, but did have a definite headquarters to work from. Where such district gangs were established, section gangs ordinarily did only small odd jobs such as patrolling, spotting or smoothing, etc., but the section foreman continued to be responsible for general track conditions and patrolling on his section. This operation was first started in October 1947, and gradually spread over the system, with generally two district gangs assigned to a roadmaster's territory. The foreman and laborers under this arrangement have seniority rights common with the section forces.

"The number of the section gangs was reduced and each remaining gang had its territory extended to cover. The net result was approximately the same number of laborers working with more efficient supervision and with a greater percentage of productive hours per man. In a few months, work required of extra gangs on such territories indicated a noticeable decrease. By June 30, 1950, 68 such gangs had been established as supplementary to section gangs."

Exit the Section Gang

In view of the success with gangs of this type, which "produced remarkably well," the road decided to experiment with use of district gangs for handling all regular maintenance, and eliminating section gangs altogether on a roadmaster's territory. It was also decided to assign a definite portion of track or territory to each district gang, and make the district gang foreman responsible for patrolling, as well as for all track maintenance, on his district.

Such an arrangement was first put into effect on July 1, 1950, on the 50th track division in Oklahoma. Subsequently, the set-up was put into effect on additional roadmasters' territories so that by late 1951 it had been established on 13 roadmasters' territories out of a total of 36, except that one section gang was left on each of four such territories to handle either a branch line or a terminal. As explained by Mr. Anderson the gang personnel for this type organization, when engaged in ordinary track maintenance, consists of a foreman, an assistant foreman, a truck driver-laborer, and 10 to 15

During the 1951 working season one of the new type gangs renewed 2,800 crossties in addition to doing substantial amounts of other types of maintenance work.

laborers, depending on the length and type of track to be maintained. Additional men are added if an unusual amount of work is programmed for the particular territory. In addition to a full complement of hand tools each gang is regularly equipped with four unit tampers and, when necessary, may obtain from the roadmaster such power equipment as bolt tighteners, drills, spike pullers, spike drivers and adzers. Regarding other features of the equipment and procedure Mr. Anderson spoke as follows:

"Transportation furnished consists of a 1½- or 2-ton truck equipped with van-type body with tool boxes and seats to accommodate around 25 men. An inspection-type motor car or a light section gang type motor car is provided for inspection purposes. In addition on some territories a large section-gang motor car is provided where certain sections of the district are not readily accessible to a highway. This gang-type motor car is usually housed near some highway crossing intersecting the portion of track not readily accessible to highway.

How Track Is Patrolled

"The patrolling of the district and the ordinary light jobs such as smoothing up, etc., are taken care of by the assistant foreman and one to three men, depending upon the district and the type of work which they are to do when out on patrol and away from the regular gang. The remaining portion of the gang, under the jurisdiction of the foreman, confines its efforts almost exclusively to out-of-face work.

"On the 50th track division mentioned above, four such district gangs, without the aid of any section forces, maintain 101 miles of Class A main track, 49 miles of branch-line track, 57.1 miles of side track, 122 main-track switches, and 149 side-track switches. The Class A main track is laid with 112-lb. and 115-lb. rail, the oldest of which is 14 years, and carries two passenger trains and fast scheduled freight trains. During 1951 one district gang on this track division, headquartered at Henryetta, Okla., with a main track district of 33 miles, made the following record: (1) Surfaced seven miles of main track out of face; (2) inserted 2,800 new crossties; (3) inserted two sets of switch ties; (4) built a mile of right-of-way fence; and (5) cleaned right-of-way, cleaned around all bridges on district and handled all other necessary jobs including patrolling.

91st Track Division

"The 91st track division, located on a line in Mississippi and Alabama carrying somewhat lighter traffic than the 50th division, is maintained by three district gangs and consists of 152 miles of main track, 32 miles of side track, 99 main-track switches, 44 side-track switches. The main track is laid mostly with 90-lb. rail and carries two passenger trains and fairly fast scheduled freight trains. During 1951 the district gang headquartered at Columbus, Miss., with a district of 51 miles of main-track, made the following record: (1) Surfaced 9.5 miles of main track; (2) inserted 2,734 new crossties and 2,500 secondhand crossties; (3) respaced joints on 7.9 miles of main track; (4) spent three full weeks raising track in sag; and (5) handled all other necessary track work including patrolling on district.

"It is to be noted that some of the work listed above is such as extra gangs formerly did. In fact, in the two cases cited, on the basis of the 1951 record the gangs would be able to surface out of face their respective districts in approximately four and six years.

The "district" gangs do much of the work that was formerly done with extra gangs. Occasionally, as shown here, they even do rail-laying jobs.

"These two cases were picked at random and are not unusual. It is expected that each gang will improve yearly with experience, better methods and additional equipment.

"In May of this year one district gang of twelve men, using an on-track power tamper, averaged almost one-half mile per day on out-of-face surfacing involving a 2-in. to 3-in. raise, in which, in addition to the lift, the work consisted of tamping and rough filling-in and dressing. On neither of these two track divisions mentioned has an extra gang been used since establishment of the all-district-gang organization.

"Where many section foremen at one time handled only the 'piddling' jobs on the section and waited for the day to come when an extra gang would be sent to pull them out of the 'hole,' the same forces today are largely pulling themselves out of the 'nole' under the all-district-gang organization. Except for heavy out-of-face rail and surfacing programs, all maintenance work on the district is carried on by the district gang without assistance from extra gangs. Today we are maintaining about 50 per cent of our heavy-traffic main track with the all-district-gang organization. Additional territories will be organized when certain present programs can be completed.

Advantages Cited

"The following distinct advantages have accrued where we have such an organization in service: (1) Sufficient force in one gang to handle almost any type of equipment or work; (2) men readily available who can be moved quickly to any point of emergency; (3) better opportunity for roadmaster or supervisor to contact and direct gangs; (4) a minimum amount of time spent on non-productive maintenance. The first three items apply not only to the all-district-gang type but also to the combination district-and-section-gang type. The last two items were made possible largely through the all-district-gang organization. The loss of man-hours from the five-day week has for all practical purposes been offset by the reorganization, change of practices and use of additional maintenance-of-way power equipment.

"The following questions should be given consideration before inaugurating an all-district-gang organization: (1) Is the roadbed stabilized so that excessive smoothing or spotting is not required? (2) Can good towns be selected for headquarters near the centers of districts? (3) Is the district adequately served by highways? (4) Is the track structure such that a definite plan of programming work annually can be set up?

Helps Solve Major Problems

"Some of the major problems facing maintenance of way supervisors today are: (1) How to secure and retain good gang foremen. (2) How to have sufficient men in a gang to make use of mechanized maintenance-of-way equipment. (3) How to stabilize employment. (4) How to meet the demands of the employee so far as living conditions are concerned. (5) How to obtain maximum productive hours out of hours paid for.

"The all-district-gang organization has assisted us very materially in solving all of these problems because: (1) Fewer foremen are needed and a higher rate of pay is established for district gang foremen over section gang foremen. (2) Gangs are readily available for handling almost any type of equipment. (3) A planned year-around schedule is possible. (4) The headquarters are located in towns having favorable living conditions. (5) Less hours are spent patrolling and riding to and from the point of work."

The master retarder, on the lead down the hump, is 99-ft. long.

This Single Yard Control Machine Does Everything

Reading makes first installation of a single machine, including control of automatic switching and control of retarders for an entire yard

The first yard placed in service to boast of a single machine to include control of automatic switching as well as of retarders is the Reading's rebuilt eastbound classification yard at Rutherford, Pa., 5.5 miles east of Harrisburg.

The yard, together with power switches, retarders and control systems, is designed to classify cars at the rate of about 125 an hour—1,000 in an eight-hour trick, or 3,000 a day. Not this many cars are handled ordinarily in a day, but the objective of the capacity of 125 cars an hour was to accept trains promptly on arrival; to classify cars accurately and quickly; and thus get them out in departing trains in a minimum overall yard time.

Because of the simplified control system and the absence of riders, the yard can be kept in service at minimum operating expense, and, therefore, is ready for service at all times when trains arrive. Furthermore, in the afternoon when the peak number of trains arrive, the maximum capacity to classify cars is utilized to extra advantage.

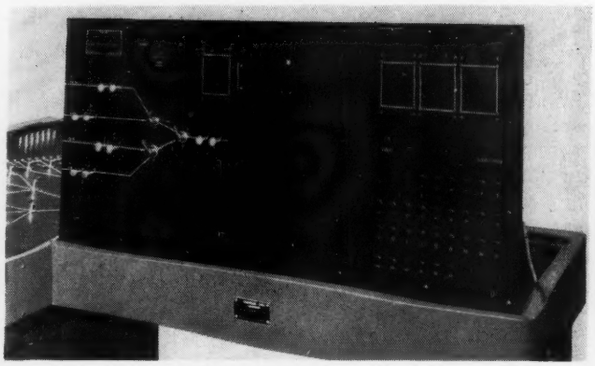
The project includes power switches and retarders not only on the 33-track eastbound yard, but also in a complementary 18-track westbound yard which classifies from 950 to 1,525 cars daily.

Including both these yards, the program cost approximately $3,000,000. The benefits are expedited classification of cars through these yards, resulting in improved service to shippers.

Coal and Merchandise

Rutherford is an important point of classification for eastward and westward traffic on the Reading. At Lurgan, 47.2 miles west of Rutherford, the Reading receives eastbound cars from the Western Maryland, consisting of traffic originating on the WM, as well as on the Baltimore & Ohio, the Nickel Plate and the Pittsburgh & West Virginia.

At Shippensburg, which is 44.8 miles west of Rutherford, eastbound cars are received from the Penn-



Panel of "stem" section of control machine in raised position to show, at right, buttons for initiating automatic switching controls, and, at left, small levers for controlling retarders.

One man operates the machine which controls the switches and also the retarders for the entire classification yard. Automatic switching controls for three following cuts can be "stored" by the machine.

sylvania; at Gettysburg, 46.3 miles west of Rutherford, eastbound cars are received from the WM; and at Harrisburg, eastbound cars are received from the PRR.

With the exception of a classified New England train each day from the B&O, all eastbound traffic is separated at Rutherford into 44 classifications. At present, the yard has 33 tracks. Therefore, during some periods of the day, the cars for several of the 44 classifications must be routed to one track, and then these cars are pulled back over the hump and classified again. This operation reduces the apparent operating efficiency of the yard but, all factors considered, this more complete classification, to save time of trains on the road, has proved to be worthwhile.

Traffic varies in days of the week and with seasons of the year. The traffic is usually heavier in the afternoon than at any other time of the day. In a recent month, the number of cars classified in an eight-hour trick varied from 521 to 713, with a peak of 873. The total for a 24-hour period ranged from a minimum of 1,132 to about 2,093 cars.

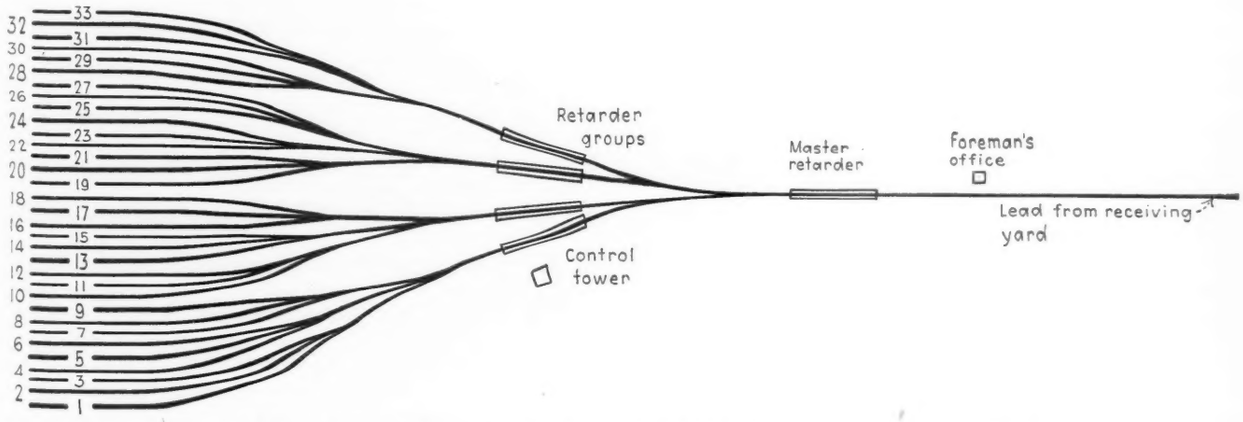
Car Riders Previously

Originally this was a gravity-type classification yard, using car riders to control the speed of cars or cuts of cars, and the switches were operated by power machines controlled from a tower. In the old yard, the classification tracks were connected to two ladder leads down each side. In order to adapt the layout of the new yards so that a minimum number of retarders would be required, the switches were relocated to arrange the tracks in groups, with nine tracks to a group. One retarder, 99 ft. long, on the lead to each group, provides final retardation on cars enroute to all nine tracks in that group. One master retarder, 99 ft. long, on the grade down from the crest, is used to maintain adequate spacing between cuts of cars. This retarder is also used to check the speed of heavily loaded cars which otherwise might accelerate too much. Two control mechanisms operate each retarder, making it possible to operate the entire retarder or either half of the retarder.

On the straight track in each group, the first two switches are lapped, and, further on, the second two are lapped. These laps were planned to attain two objectives: (1) to make the classification tracks as long as possible by using a minimum for turnouts; and (2) to make the distance from the final retarder to the clearance point on all the classification tracks, in that group, as nearly the same as practicable. Thus the four retarders, totaling 396 track-feet, serve the entire layout of 33 classification tracks and will also serve the three more tracks to be added later.

Changes in Grade

Previously, the crest of the hump was at an elevation of 455 ft. above sea level. The new crest is at an elevation of 443.4 ft., and at about the same location. The descending grade is 3.13 per cent for the first 125 ft.,



Plan showing layout of tracks, switches and retarders in the Reading's rebuilt classification yard at Rutherford.

then 2.19 per cent for about 100 ft., then 0.8 per cent through the principal switches and retarders. The revision of grades necessitated a cut about 8 to 10 ft. deep in rock, through the area down the hump. Beyond clearance point on the classification tracks, the grade is 0.2 per cent descending, which is proper to keep cars rolling at about 4 m.p.h. with sufficient momentum to couple with the car ahead, without heavy impact that might damage lading.

New Type Control Machine

Automatic switching is a system in which, for each cut of cars, the operator pushes a button (marked for the classification track to which the cut is to go), and the control, thus initiated, automatically positions the switches ahead of the cut as it passes down the grade and to its track. This automatic switching system (using equipment and control apparatus made by the General Railway Signal Company) was first installed in 1950 in yards on the Canadian Pacific and the Illinois Central. In those projects, the push-buttons are at the hump office, and the operator in the tower controls only the retarders, normally. The eastbound yard at Rutherford includes this automatic switching system, the new and novel feature being that the initiation buttons are in the tower on the same panel as the controls for the retarders.

The control machine is of the desk type, consisting of two panel sections which form a "T." The right-hand section, 20 in. by 42 in., is directly in front of the operator, and the cross section, 24 in. by 36 in., is just to the left. The right-hand section, in front of the operator, is flat like the top of a desk, while the left-hand section is inclined, so that all buttons and control levers are within easy reach of the operator. Each panel is hinged at the edge to swing up toward the operator for inspection of lamps and wiring. Pictures made while panels were standing vertical are used herewith because such views illustrate the details clearly. The 36 butttons (one for each track) for initiating automatic control of the switches are at the right end of the panel in front of the operator. To the left of these buttons is an open space for switch lists, which are held down by a magnetic paper weight. The left portion of this panel and the entire second panel are taken up by a plan of the tracks reproduced in miniature by lines 1/8 in. wide, with levers which represent the locations of retarders and switches.

Routes Can Be "Stored"

The switch list shows the track to which each car or cut of cars is to be routed. As the first cut comes over the crest, the operator pushes the button for that track, and this number then appears in the light type indicator in the panel just over the portion of the diagram representing the hump. If he chooses, he can push additional buttons to store automatic switching controls for the three following cuts, and these numbers will appear in three separate indicators located just above the buttons. As the first cut passes down the hump and over the first switch, the number for the next lineup moves over to the indicator on the panel just above the section of the diagram representing the hump, and the other numbers move up progressively. Thus the operator has complete information concerning the route which is set up for the next cut, and for the next three following cuts.

As a supplement to automatic switching, manual control of each switch is provided for use when making tests or during trimming moves in the yard. This manual control includes rotary-type levers which are located on the control panel track diagram at locations corresponding to the respective switches.

The automatic switching system requires only a small part of the operator's attention, and, therefore, he has adequate time to control retarders for the entire yard. On the control panel at places corresponding to the location of each retarder, there are two short chromium-plated toggle levers, one each for each retarder operating mechanism. Such a lever has three positions: a position toward the operator for no retardation, a center position for light application of the retarder, and a position away from the operator for heavy application of the retarder. The operator can throw the two levers to control both halves of an entire retarder, or he can throw each lever separately as required.

The switch list shows whether cars are empty or loaded, and, if loaded, whether heavy or light. Accordingly, the operator sets up the retarder control as a car or cut of cars approaches. Then he watches the cut as it proceeds into the retarder. When the speed is reduced sufficiently he flips the levers to the open position and the cut is released.

High-Speed Switch Machines

Each power switch is operated by a G.R.S. Model 6 high-speed electric switch machine, especially designed to operate a switch in 0.6 seconds. The switch machine is so constructed that it can be trailed through (when trimming) without damage to the machine, switch points or fittings.

If a piece of coal or other foreign object blocks operation of a switch, a red light in the face of the switch lever is flashed. Then the switch returns automatically to its former position, and an audible indication is sounded in the tower. The operator can then use the manual control to determine whether the coal can be crushed out.

These switches are equipped with gas-burning snow melters made by the Rails Company.

Motor Truck for Maintenance

Experience indicated that tools and repair parts required in maintenance of power switches and retarders were too numerous and heavy for men to carry, and, furthermore, maintenance would be expedited and safety increased by having the tools out on the job, rather than in a headquarters some distance away, when needed quickly. Accordingly, for this new eastbound Rutherford yard, the Reading purchased a 1/2-ton open-body motor truck. Open space between tracks is available for this truck to drive up to all retarders and nearly all power switches. Only three plank crossings were required.

Tool chests are built into the body of this truck. A heavy-duty crane frame, made of 2-in. pipe, is built into the rear end of this truck. A 3/8-in. wire rope goes over the main sheave on this frame, and down to the drum of a winch in the front end of the body of the truck. This winch is power driven by a special take-off from the transmission. By backing this truck up to a switch or retarder, the heavy parts can be handled easily, and with greater safety to the maintainers.

This installation of power switches, retarders, control machine and other signaling equipment was planned and installed under the supervision of the engineering department of the Reading Company. Equipment was furnished and installed by the General Railway Signal Company, with employees of the Reading.

It is better for common carriers to find new passenger markets among the 85 per cent of intercity travel which uses private cars than to contend with each other for the 15 per cent they now move, representatives of air and bus industries told the railroad passenger traffic officers.

Passenger Men Look at Competition, New Tools

Traffic officers probe Budd cars, simplified tickets, incentive fares, and integration of management—Hear air and bus men and the military

Some 200 registered members and guests at the 89th annual meeting of the American Association of Passenger Traffic Officers, in San Antonio, Tex., October 12-15, had placed before them reports on new tools for cutting costs and encouraging heavier patronage—like diesel railcars, frozen pre-cooked foods in diners, simplified forms of ticketing, and family and group incentive fares; heard representatives of competing air and bus carriers; were told by high spokesmen of two branches of the armed forces their part in the present conflict; considered air competition and subsidies; and took stock of administrative problems in delivering their end product—an acceptable, profitable passenger service.

President Edward G. Baker, general traffic manager of the St. Louis-San Francisco, steered the meeting through a crowded docket which was distinguished for attention to the most up-to-date issues in the field, rather than routine consideration of continuing problems. Elected president was John F. Whittington, general passenger traffic manager of the Baltimore & Ohio; vice-president, Claude E. Peterson, vice-president—system passenger traffic, Southern Pacific; and secretary-treasurer, B. D. Branch (re-elected). Newly named to the Executive Committee were, chairman, Fred H. Baird, assistant vice-president, New York Central; Harry Sengstacken, passenger traffic manager, Chicago, Milwaukee, St. Paul & Pacific; and Earl R. Comer, passenger traffic manager, Pennsylvania. J. B. Sharpton, passenger traffic manager, Atlantic Coast Line, was reappointed to the committee.

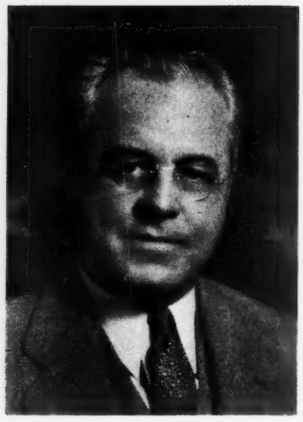
Incentive Fares—Successful?

Family and group economy fares established by Eastern railroads on June 25 (*Railway Age*, June 16, page 12), for a four months' experimental period, and now extended to December 31, to give a six months' test, have brought some additional revenue; have tapped private automobile travel; and have produced widespread publicity and public goodwill. On the other hand, because

New President
John F. Whittington

Retiring President
Edward G. Baker

New Vice-President
Claude E. Peterson



Secretary-Treasurer
B. D. Branch

passenger revenues as a whole have been declining since June and because the "sample" is too small, it would be premature to report whether the incentive fares have produced sufficient new revenues to counteract losses in revenues which would have accrued from standard fares. These were the conclusions of representatives of the three largest passenger roads in the East, rendered in separate reports.

R. H. Holter, general passenger agent of the B&O, reported that, during the first two months the fares were effective, sales of family tickets on his road totaled $77,248—on which were carried 2,750 adult pay passengers, 426 half-fare passengers, and 3,156 free passengers. Free passengers under 12 years old averaged about 1.1 to each adult pay passenger. On the B&O the average family on a special ticket comprised 1.2 adult passengers, 0.2 half-fare passenger, and 1.3 free passengers—or 2.7 passengers per ticket. During the same months sales of "economy group" tickets on the road totaled $71,462—comprising 3,033 adult and 47 half-fare passengers. Total group and family sales represented about 6 per cent of total coach (non-commutation) revenues.

By special studies, the B&O has determined that it earned more revenue than it would have without the fares, but is reserving judgment as to the desirability of making the fares permanent until a longer test period has accrued.

On the NYC, study of "samples" of traffic moving on the experimental fares were "inconclusive but encouraging," reported S. W. Bone, passenger traffic manager. "Inclined to doubt whether we can judge what is good for us and what is bad, on short notice," he contended that accurate measurement of their effect might never be possible. But he knows of nothing in the past 20 years which has attracted such favorable publicity. Arguing that there is nothing sacred about 5 and 12 years as limits of free and half-fare privileges, respectively, Mr. Bone believed it favorable for his road to have carried 32,000 youngsters free during July, August and a portion of September, and to have attracted the 20,000 adults who accompanied them. The road's survey showed that 32 per cent of the men, and 41 per cent of the women, moving on the new fares, would not have made the trip in their absence. Only five per cent of the sample studied were on business trips; 18 per cent had not made a train trip before.

Although it spent $28,000 to study the result of the fare experiments in July and August, the Pennsylvania cannot make the unqualified statement that the fares produced additional revenue, declared C. W. Getty, assistant passenger traffic manager. During those months, 20,000 passengers moved under the family plan—12,000 of them paid adults. Sales under the family and group economy plans constituted 1.5 per cent of the road's total passenger revenues. "There is no denying the excellent public acceptance of these fares as a public relations asset," said Mr. Getty, "and we will continue the experiment with an open mind."

Air Competition

A direct assault on the subsidy-favored position of the air lines was advocated by newly elected vice-president Peterson. He suggested that passenger traffic officers (1) give the facts to community groups about the burden imposed on local taxpayers by the air lines; (2) establish "a national agency"—possibly in the Association of American Railroads—to study air line subsidies, particularly at airports, with a view to anticipating a future swell in public support of facilities for air freight, as well as passenger, operations; (3) "make it as easy as possible for travelers to do business with us" [In this connection, he referred to the new "telephone sales service" of the SP (*Railway Age*, September 29, page 18)—wherein "every person entering the travel office is the first to get waited on"—as "working out beautifully" and "eliminating the disastrous bottlenecks in ticket offices."]; (4) warn the government that undue diversion of military traffic and mail will have a serious effect on the equipment pool with which the railroads would have to handle an all-out emergency; (5) stop providing "a standby service" for the air lines; (6) match the publicity efforts of the air lines; (7) stress interdependence of the railroads in public goodwill; and (8) "make the most of our many natural advantages." Concluded Mr. Peterson: "It has to be a lusty fight. Whether it's to be the train or the plane may well rest in our own hands."

Regarding the "unethical" advertising of the air carriers—wherein untrue and direct comparisons with an obsolete brand of railroading are made—the SP officer urged the railroads to call the shots of air lines when they transgress; complain to the publications carrying such advertising; seek the aid of "better business bureaus"; issue "good humored" rebuttals; and "hammer home" the railroads' assets fairly.

Asserting that, of the 30,000 Navy and Marine men

who made the successful and critical 1950 landing at Inchon, Korea, some 50 per cent had been in civilian life only six weeks before, and that the railroads had played an important part in their preparation and assembly. Francis P. Whitehair, Under Secretary of the Navy, said that, in the past year, the railroads had hauled 2,100,000 Navy personnel and 55 per cent of the Navy's intercity shipments. He characterized the Navy's current mission as "laboring under new conditions—mobilizing and demobilizing at the same time." The railroads, he recalled, had recently moved the entire equipment of the service's post-graduate school from Annapolis, Md., to Monterey, Cal.,—including the most fragile type of electronic equipment—without a single mishap. Whereas a World War II destroyer had about 12 major electronic devices, today's typical destroyer has a minimum of 196. Loading problems of devices like these are now the joint study of the Navy and of packaging experts furnished by the railroads.

"The railroads are still the backbone of the country in carrying out extensive military operations," according to Lt. Gen. William Hoge, commanding the Fourth Army. Their large capital expenditures in recent years, plus proved adaptability since Korea, "indicates to me that they will be able to meet any emergency." The general found particular value in the enlarged active reserve program for railroad transportation units being sponsored by individual railroads and in local chapters of the National Defense Transportation Association, in which railroaders are active.

Changes in the Diner

The Rock Island's brief experience with use of foods pre-cooked and frozen in its own central facilities has proved successful, reported M. J. Reynolds, manager of the road's dining car service. An indication of this success is that the management has authorized the building of food lockers at key points on the system. Asked whether the new technique has permitted a reduction in labor costs, the speaker replied "no, not yet"; that "we fought the battle of food preparation and conservation first; we'll fight the labor battle second."

Thus far, public reaction to frozen foods, and to plastic tableware, has been good. There has been a big shift to the packaged meals because of lower prices. Whereas 7 out of 10 dining car patrons formerly chose *a la carte* items, now 8 out of 10 buy packaged meals. The number of meals served has risen out of proportion to the increase in passenger traffic. Use of frozen foods has enabled the road, on one run, to use one chef and a counterman in a coffee car unit to serve full meals, to twice as many people, as it formerly served snacks alone.

From the Competition

When it is considered that total intercity travel on all common carriers has declined steadily since 1944, but that automobile registrations continue to climb, it is clear that none of the former can prosper if it competes entirely for the existing common carrier market, contended M. D. Miller, regional vice-president of American Airlines. "If the automotive industry itself had estimated its potential as that which it could take from the horse and buggy, it would have missed its actual market by a fantastic margin; actually it followed the principle 'There is no fixed amount of transportation to be performed'."

The heavy investment now being made in more productive capacity by the air carriers is proof that they have faith in new markets to be created. Thus, his own company now has on order $60 millions of new planes —including 26 DC-7's (costing $1,600,000 apiece) which will fly at 400 m.p.h. and make New York-Los Angeles in less than 7 hours. He anticipated these would be the last type of propeller planes built for trunk line commercial use in this country. Today, American does not operate an single plane it operated before World War II.

New Attractions in Air Travel

To fill this added plane capacity, the air lines are selling new desires in travel. They believe "implicitly" in training all personnel in the art of selling; the principal target of their advertising is the public which now vacations by auto; considerable sums are being spent to promote rental auto service at destination; plans are already under way for a "great expansion" of tourist class service (air coach)—American itself adhering to the principle that it ought to stay in the long-haul field. The "family fare plan," which American introduced three years ago, now adopted by most of the industry, has reduced the normal "spread" in patronage from the slack (Monday, Tuesday and Wednesday) to the busy portion of the week, from 20 points to 5. In most cases the business would not exist without the incentive plan. Air travel credit cards have more acceptance than ever, even though holders no longer get a discount. Their biggest value to the air lines, said Mr. Miller, is in giving their own salesmen something tangible to sell; in enabling the companies to put their representatives on a quota basis, and to equip them "to tie down the sale and bring back signed contracts." In this connection, the air line officer said his industry intended to do more about convention travel; that, up to now, "if there is anybody who knows how to sell convention travel, it's the railroads."

An extensive review of the history and present character of intercity bus carriers was presented by L. H. Ristow, director of traffic, Greyhound Corporation. Like railroads, the large bus companies have lost a lot of local traffic, and must find profit in intercity travel. On suburban routes, costs have "gone way out of line with revenues"—Greyhound would be glad to get rid, for example, of its commutation service north out of San Francisco, which utilizes some 125 buses. The buses' package express business is growing—largely because they can't raise rates commensurate with boosts made in parcel post and railway express charges. (Some lines are carrying packages for as little as 25 cents.) As a rule the established bus lines can't bid successfully for post office "star" routes and find little profit as yet in "highway post office" operations.

Like railroads, bus operators have trouble getting state commissions to allow fare increases or service curtailments. But they did successfully establish their major contention in the Interstate Commerce Commission investigation of bus fares starting in 1947, wherein the industry spent between $1½ and $2 million putting in testimony—namely, that fares should be based on operating ratios, and not return on investment. Even today, when it has become "big business," the bus industry has comparatively little investment, declared Mr. Ristow, and earns $1 of revenue for each 39 cents it has invested in equipment and facilities. "The ideal bus business is one without any capital investment at all." The industry contends it should be allowed to attain an operating ratio—after taxes—of 90 per cent.

Simplicity of national tariffs—whereby any drug

Stocks of tickets required are being reduced as an increasing number of roads turn to new book and other simplified types of interline tickets, reports a special committee. Latest possibility is "pressure writing" paper, eliminating carbons. Although this product is not yet available commercially, the railroad passenger officers have already investigated its merits—being the first business in the country to do so.

store clerk can quote fares to some 80,000 points in the country—was credited by the bus officer with attracting business not otherwise available. Few bus ticket sellers are salaried employees.

Mr. Ristow called upon the railroads to help fight rulings which allow "brokers" to charter buses and sell individual tickets, at reduced rates, when loads are favorable—which he termed "a common menace"—and to join with the National Association of Travel Organizations in promoting the "Monday Holiday" and "All Year 'Round Vacations" campaigns. The former he described as advocating a "Presidents' Day," the third Monday in February, to replace Washington, Lincoln and other local observances; a "Memorial Day" on the last Monday in May; an "Independence Day" on a Monday in July; and a "Thanksgiving Day" on the last Monday in November.

Reporting that bus lines find great success in running their own tours, but that they have difficulty getting patrons to come from distant points to enjoy them, Mr. Risow indicated his company is considering asking the railroads to join in providing long-haul access transportation.

New Ticketing—By Types

Armed with cartoons on large display panels, Harry Sengstacken, chairman of the Committee on Standard Forms of Interline Tickets, reported on the latest advances in tickets. At the close of his formal report, he revealed that the committee's researches had led it into experimentation with a new type of paper which, he said, "has got me starry-eyed." The new product is not yet on the market, nor can its manufacturer be revealed, yet the product has already been made up into a test book-type interline ticket by the committee. The paper, which permits multi-copying without carbons, will, Mr. Sengstacken believes, have a wide application for all kinds of business forms.

Dubbed by the committee chairman "Lady Knickerbocker," the ticket printing machine known as "Ticketeer," produced by the Burroughs Adding Machine Company, uses a special matrix for each destination; prints the complete ticket; and maintains all information necessary for auditing and accounting purposes. Leased for a minimum of a year at a monthly rental of $95 (plus federal tax of $9.50) the machines have proved so favorable that the New Haven expects to use enough additional to mechanize its Grand Central ticket office completely—including issuance of Pullman tickets. The NYC and the Chicago & North Western are also experimenting with this machine.

What the committee calls the "Flying Dutchman," a multi-destination, fold-type interline ticket, was introduced by the Pennsylvania in May. The road uses 16 different forms, each containing 30 printed, and one blank, destination. One punch indicates the destination on all coupons. It is now in experimental use in New York and Philadelphia covering principal destinations on southern connections. The NYC is also trying out this type of ticket.

Inaugurated by the Seaboard early in 1951, the "Southern Belle" is a book form of interline ticket with snap out carbons. The "Annie Oakley," a book ticket

having coupons the size of a dollar bill, in which the back of each coupon is precarbonized, was adopted by the Union Pacific in March 1951 and by the Canadian National in May 1952. Inside of the back serves as the passenger's receipt. The UP indicates that six book forms will replace 622 forms of conventional type interline tickets. The "Chicago Story," another book type ticket, is currently in use on the B&O, the Monon, the SP (including T&NO), the Western Pacific, the Milwaukee and in the Chicago Railways Hotel Ticket Offices. This ticket is vertical in style, with spot carbonization on the rear of each coupon.

Integration of Effort

A greater voice for the passenger traffic department in every phase of railroad management which affects the passenger business was cited as a necessity by William H. Schmidt, Jr., executive editor of *Railway Age*. Referring to the responsibility given to each division of large industrial corporations, like Westinghouse and General Electric, for their particular product group, the speaker contended that somebody on the railroads must follow passenger operations through from equipment to maintenance to operation, and that the men best equipped to advise were those on whom the task of selling and pricing passenger transportation has been imposed. He did not advocate dilletantism in technology, but the right of the salesman to tell the producer "how his stuff is going over with the public"—just as a circulation manager on a paper has the right to tell the editor what kind of material "pulls and what repels."

Mr. Schmidt attacked careless use of the I.C.C.'s passenger expense formula as a needless brake on the enthusiasm of passenger salesmen and urged that every department of the railroads be advised just what the so-called "deficit" really is.

Budd Cars on New Haven

By the end of the first quarter of 1953, reported C. E. Williams, passenger traffic manager, the New Haven will have 40 "Shoreliners" (Budd RDC cars) in service, which will release 16 diesel locomotives, 3 gas rail cars, 46 coaches, 9 mail cars, 9 baggage cars and an older three-car articulated train—in addition to providing numerous new services not hitherto available. Based on the road's new fall schedules, about 1,925,000 train-miles in local service may be considered as the potential for "Shoreliner" operation. Of this potential, almost 53 per cent is already so operated; some 240,000 train-miles will be added when more equipment is received.

By the end of the first quarter of 1953, some 65 per cent of the present mileage potential will be operated by "Shoreliners." The New Haven officer also told of the success of both the RDC's and the Mack railbus (FCD) in attracting new business to the rails on brand new runs. At present the NH is getting an average of 325 miles a day out of each RDC unit. On each type of unit, run singly, the NH uses a two-man crew.

Shown to the passenger men was a color-sound slide film produced by the Pullman Company for its service personnel, titled "Service is Your Business."

This SP Lubrication Instruction Car . . .

Is equipped with sample journal boxes and facilities for demonstrating the correct manner of their inspection and servicing

For the purpose of instructing oilers, car inspectors, supervisors and others in the correct manner of inspecting, servicing and repairing conventional and roller-bearing journal boxes and appurtenances, the Southern Pacific recently converted a surplus lounge car to a lubrication instruction car.

The car contains freight and passenger journal boxes of various A.A.R. designs in use on American railroads today, such as integral boxes with and without waste retainer ribs, separable bolted boxes, and separable pedestal-type boxes.

Two of the journal boxes which are used for instructing box packers in the proper method of packing and applying or removing packing retainers are set at the same working height as a journal box on a car.

These boxes are split along the horizontal center line and are hinged on one side so that the entire top with brass and wedge intact can be lifted up from the journal and the general arrangement of the packing inspected.

The journal itself can then be mechanically raised and swung out of the way so that a complete view of the packing is available.

A display board contains removable standard tools, such as packing hooks, packing irons, dust guards, and wedge and journal-bearing gages which are used during the process of packing journal boxes at either a train yard or rip track.

Below the display board in a cabinet is a set of perfect and imperfect car brasses and wedges, which the inspector uses to illustrate the proper use of the gages and to point out rejectable from acceptable material. Hammer test of bearings for sound or loose linings is also demonstrated for benefit of employees.

There are three different makes of roller-bearing assemblies in this car which have cut-away housings for a complete view of interior working parts such as rollers, races, oil seals, etc., for the ready observation of those employees concerned with their maintenance.

Moving pictures are available for illustrating the proper method of dismantling and reassembling the

different makes of roller bearings. These are shown on a screen at the end of the car opposite that shown in the illustrations.

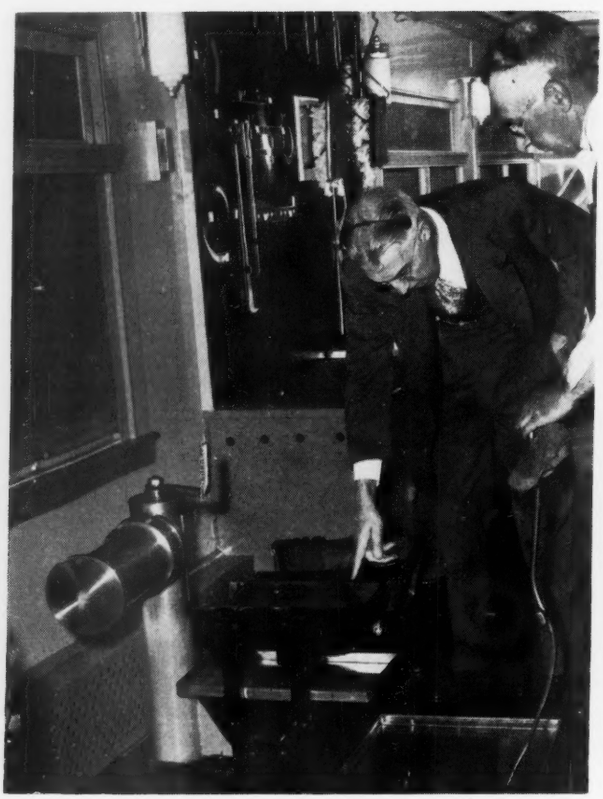
The Southern Pacific has established regular journal-box inspection and servicing stations throughout its system and has prepared a map depicting these points, with notation thereon showing just what sections of IX, X, or XI of the A.A.R. Lubrication Manual are applicable at each point. Two maps, together with copy of instructions as outlined in A.A.R. Manual, are on display in the car.

It is planned to take this car to all oiling stations on the SP system to instruct and train personnel on all three shifts regarding the proper manner of removal, inspection, and reapplication of packing, wedges, bearings, and packing retainers, so that a uniform interpretation and understanding of the instructions will prevail.

This car will not be confined solely to training of mechanical personnel, but will be available to superintendents, yardmasters, road foremen, and train crews, for the purpose of keeping them currently familiar with the working parts of a journal box and its function in regard to successful train operation on the road.

Mounted in the car are freight and passenger journal boxes of various A.A.R. designs. The roller-bearing boxes have cutaway housings.

Instructing a group of car men in packing a journal.



Examining the packing in the disassembled journal box.

ORGANIZATIONS

The annual dinner of the **New York Railroad Club** will be held at the Commodore Hotel, New York, on December 11.

The "Railroad Passenger Deficit Problem" will be a discussion topic at the annual convention of the **National Association of Railroad and Utilities Commissioners** to be held in the Hotel Marion, Little Rock, Ark., November 10-13. Walter R. McDonald, of the Georgia Public Service Commission, will lead the discussion on the railroad passenger deficit, which is scheduled for the morning session on November 11. A discussion on November 13 will attempt to answer the question "Can the Regulatory Process Be Accelerated?" Leaders of this discussion will be Richard A. Mack, of the Florida Railroad and Public Utilities Commission, and W. E. Torkelson, chief counsel for the Wisconsin Public Service Commission.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Baltimore & Ohio** has ordered two 125-ton flat cars and one 86-ton flat car from its own shops at an estimated cost of $70,000.

The **Chicago & North Western** has ordered 100 70-ton ore cars from the Bethlehem Steel Company at an estimated cost of $650,000. Delivery is scheduled for March and April 1953.

The **Illinois Central** has ordered 30 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Co., at an estimated cost of $10,290 each. The cars are to be equipped for carbide loading.

LOCOMOTIVES

Locomotive Installations Now Total 1,893 for 1952

Class I railroads installed in service 1,893 new locomotives during the first nine months of 1952, compared with 1,856 in the same period of 1951, the Association of American Railroads announced last week.

The locomotives installed in 1952 consisted of 2,417 power units. This compares with 2,573 power units installed in the like 1951 period, despite the larger number of locomotives put in service this year.

Of the new locomotives placed in service this year 1,879 were diesel, 13 steam and one electric. Locomotives installed through September of last year consisted of 1,840 diesels, 14 steam and two electrics.

New locomotives installed in September this year totaled 190, all of which were diesel except two steam. In the same month last year 209 locomotives were put in service; 207 were diesel and two steam.

Class I roads had 862 new locomotives on order on October 1, 1952. These included 841 diesels, having 1,006 power units. The remaining 21 locomotives on order were steam. On October 1 a year ago, Class I roads had 1,827 new locomotives on order, consisting of 1,802 diesels, 23 steam and two electrics.

SUPPLY TRADE

Nelson Stud Welding, division of **Gregory Industries, Inc.,** has appointed **Alex Oleair** as field engineer in charge of its new office at 710 West 21st street, Norfolk, Va. Mr. Oleair joined Nelson in 1947 as a member of the customer engineering department. He has been Nelson's manager of customer service for transportation industries since 1951.

Templeton, Kenly & Co., Chicago, has consolidated its New York domestic and export offices. **E. A. Zimmerman,** formerly manager of New York domestic sales, will direct both operations from new quarters at 60 East 42nd street, New York 17.

Paul J. Maholchic has been appointed assistant to president of **John L. Kern, Inc.,** manufacturers and distributors of steel specialties, steel fabrications and machine tool products. Mr. Maholchic recently resigned as vice-president in charge of sales of the Walster Corporation, Carbondale, Pa.

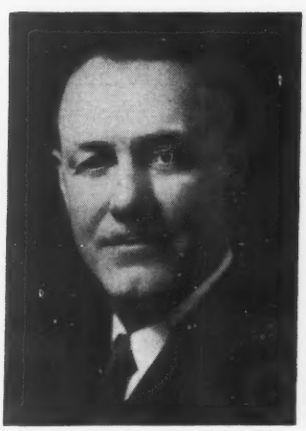
Kempton Dunn, vice-president and treasurer of the **American Brake Shoe Company,** has been elected first vice-president. He has been with the

Kempton Dunn

company since graduating from college in 1932. He became treasurer in 1942 and was secretary of the company from 1947 to 1949. He is also a director.

Bard Browne, former vice-president of **Combustion Engineering-Superheater, Inc.,** has been appointed general railroad representative for the **Leslie Company,** Lyndhurst, N. J. Mr. Browne will work with other Leslie reresentatives in their contacts with railroads.

James M. Mead, formerly manager of the New York plant of **Joseph T. Ryerson & Son,** has been appointed first assistant to **Ainslie Y. Sawyer,** vice-president in charge of purchasing,



Andrew J. Pizzini (left), has been elected chairman of the board of the Waugh Equipment Company, and Harry C. Hallberg (right), has been elected president. The company also has elected Jabez Dean Hammond as executive vice-president. Mr. Pizzini has been president of the company since its inception in 1924. Mr. Hallberg joined the firm in 1927, was placed in charge of sales in 1941 and appointed vice-president in that capacity in 1947. He also is a director. Mr. Hammond joined the company in 1932 and was elected vice-president in 1938. He also is secretary.

PART	MATERIAL
Axles	C-V steel Cr-V (SAE 6145) steel Mn-V steel
Bolts	Cr-V (SAE 6135) steel Mn-Cr-V steel
Brake Rigging Castings	Mn-V cast steel
Commutator Spider Castings	Mn-V cast steel
Connecting Rods	Cr-V (SAE 6135) steel Cr-V (SAE 6140) steel
Couplers	Mn-V cast steel Ni-V cast steel
Crankcases	Mn-Mo-V cast steel Mn-V cast steel Mn-V plate steel
Crankshafts	Cr-Mo-V (4140+V) steel Ni-Cr-Mo-V (4340+V) steel Cr-V (6140) steel C-V (1045+V) steel Low Cr-V (50T46) steel

USE VANADIUM STEELS AND IRONS FOR

Cylinders	Cr-V cast iron
Cylinder Heads	Mo-V cast iron Ni-Mo-V cast iron
Cylinder Liners	Cr-Mo-V cast iron Mo-V cast iron
Engine Block Bases	Mn-V plate steel
Equalizers	Mn-V steel
Exhaust Manifolds	Cr-Mo-V iron
Gears and Pinions	Cr-V (SAE 6145) steel
Injector Tips	Cr-V (SAE 6145) steel
Oil Pan Beds	Mn-Mo-V cast steel Mn-V cast steel Mn-V plate steel
Pistons	Mo-V cast iron Ni-Cr-Mo-V cast iron Ni-Mo-V cast iron
Piston Pins (Wrist Pins)	Cr-V (AISI 6120) steel
Rocker Arms	Cr-V (SAE 6135) steel Mn-V cast steel
Rocker Arm Brackets	Mn-V cast steel
Rocker Arm Shafts	Cr-V (AISI 6120) steel
Springs	Cr-V (AISI 6150) steel Cr-Mo-V steel Cr-W-V steel
Truck Frames and Bolsters	C-V cast steel Mn-Ni-V cast steel Mn-V cast steel Ni-V cast steel Mn-Mo-V plate steel Mn-V plate steel

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The mechanical properties required for satisfactory operation and long service life of Diesel locomotives are readily obtained by the use of Vanadium steels and irons.

Recommended types of Vanadium steel and iron for some of the more important applications are given in the accompanying list. Many of these parts have already established satisfactory service records.

A choice of materials is shown in most instances to cover individual preferences and variations in design and type of service required.

The metallurgical engineers of the Vanadium Corporation of America realize that each part is an individual problem and are prepared to cooperate to the fullest extent in the selection of the best material for each application.

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procurement and merchandising, with headquarters in Chicago. **William O. Springer,** manager of the Cleveland plant since 1945, will succeed Mr. Mead at New York.

O. H. Anderson, formerly managing director and vice-president of the **National Steel Car Corporation,** Hamilton, Ont., has been elected president to succeed **A. Van Hassel,** who will

O. H. Anderson

continue as a director. Mr. Anderson has been with the company for over 32 years. He was appointed chief mechanical engineer in 1925 and has been vice-president since 1942.

Neil L. Anderson, Cincinnati, Ohio, district sales manager of the Steelstrap department of the **Acme Steel Company,** has been appointed manager of that department, with headquarters at Chicago. In his 33 years with the

Neil L. Anderson

parent company Mr. Anderson has served with the advertising department, as a sales correspondent, as a salesman in the Indianapolis territory, and finally as district sales manager in the Cincinnati territory.

The **Caterpillar Tractor Company** has appointed **E. C. Chapman** as assistant sales manager for the northern portion of the eastern sales division, succeeding **J. G. Findeisen,** who has accepted a position with the **Shelley Tractor & Equipment Co.,** of Miami, Fla., a Caterpillar distributor.

Appointment of **V. Z. Pavlenko** as assistant export divisional manager has been announced by the **Caterpillar Tractor Company.** Mr. Pavlenko will

V. Z. Pavlenko

assist in administering export sales activities in Africa, India, Pakistan, and the Middle East, as well as continuing direction of the export training program.

OBITUARY

Fred H. Haggerson, 68, chairman of the board of the Union Carbide & Carbon Corp., died on October 14, after a short illness.

CAR SERVICE

I.C.C. Service Order No. 892, which became effective at 12:01 a.m. October 21, placed restrictions on rail movements of unbilled bituminous coal from mines affected by strikes resulting from the Wage Stabilization Board's refusal to approve a wage increase negotiated by the United Mine Workers with the mine operators. Issued upon representations of the Defense Transport Administration, the I.C.C. order was designed to implement Solid Fuels Order No. 4, issued October 18 by the Defense Solid Fuels Administration of the Department of the Interior.

The D.S.F.A. order barred coal shipments from the affected mines after midnight, October 18. The I.C.C. order required shippers to furnish originating railroads with shipping instructions containing a certification that shipments were being made pursuant to the D.S.F.A. order.

In his latest monthly review of "The National Transportation Situation," Chairman A. H. Gass of the Car Service Division, Association of American Railroads, had figures showing that bituminous coal stocks on September 1 amounted to a 77-day supply at the current rate of consumption.

FINANCIAL

Recap Plan Proposed By Katy Directors

Directors of the Missouri-Kansas-Texas have approved a plan for modification of the road's capital structure and have authorized its officers to seek I.C.C. authority to submit the plan to Katy stockholders for their approval, according to provisions of the Mahaffie amendment to the Interstate Commerce Act.

The plan, with a proposed effective date of January 1, 1953, contemplates exchange of new stock for old stock as follows: For each present preferred share stockholders would receive one share of new $50 par preferred A stock, one share of new $50 par preferred B stock, four shares of new $10 par common stock and a warrant to purchase one new common share; for each present common share stockholders would receive one-third of a share of new common stock and a warrant to purchase one new common share.

The new preferred A stock would carry a five per cent prior dividend payable from earnings or surplus, cumulative only to the extent that there is available net income therefor. It would be callable and entitled on call or liquidation to priority of its par value plus accumulated and accrued dividends. The preferred B stock would be non-cumulative and entitled to dividends up to $2.50 a share after payment of all preferred A dividends, after which it would participate with the common on a share-for-share basis. It would be callable at par value plus accrued dividends and on liquidation would receive its par value after the preferred A and then fully participate with the common in additional assets. Both new preferred issues would vote equally with the common but would have no preemptive rights.

Each warrant, with payment of $10, would be exchangeable for one new common share, or five warrants, with one new preferred B share, would be exchangeable for five new common shares.

Available net income, for accumulating dividends on the new preferred A stock, is defined by the plan as system net income after deduction of all fixed and contingent charges, including sinking funds, and a capital fund of either $2,000,000 or 2½ per cent of total operating revenues, whichever is greater.

Stock liability, under the proposed plan, would, exclusive of any exercise of warrants, total $96,077,280, compared with present stock liability o'

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Cyclonic Combustion, the revolutionary new flame control used exclusively in Cyclotherm steam generators, reduces heating surface requirements from 5 to just 3 sq. ft. per B.H.P.—produces 66% more heating power per sq. ft.

Cyclonic Combustion controls flame characteristics in a revolving spiral vortex traveling the full length of the furnace to insure the maximum in heat transfer without direct flame impingement or hot spots. This high heat transfer rate enables Cyclotherm 2 pass generators to maintain a guaranteed minimum efficiency of 80% for any steam requirement—at a saving of up to ⅓ the space of conventional package steam generators.

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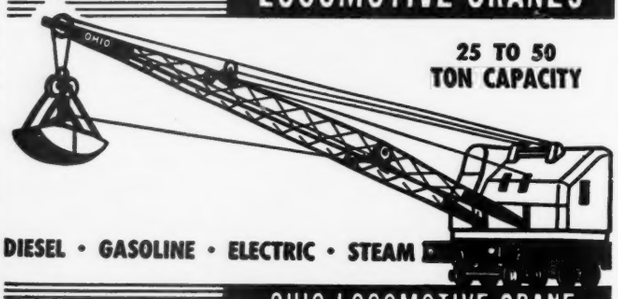
Large scale producers of . . . big weldments on a production basis — die pressed channels for bus, truck and trailer chassis — railway cars, repairs and parts — miscellaneous heavy presswork.

OHIO LOCOMOTIVE CRANES



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Seating Capacity — 48.

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$133,375,850. Outstanding shares of all issues under the plan would total 4,271,688, compared with the present total of 1,475,977.

The directors also have declared a dividend of $1.25 a share on the present preferred stock, on which accumulations aggregate $147 a share. The dividend is payable next January 5 to stockholders of record December 15. D. V. Fraser, Katy president, said the dividend is in keeping with dividend requirements of the new preferred stocks as proposed in the new plan and that, while the plan is under consideration, the board will make future payments on the present preferred to the extent that the board judges the necessary income is available, such payments being deemed applicable to dividends on the new preferred stocks if the plan becomes effective.

Mr. Fraser pointed out that dividends on the present seven per cent preferred stock have accumulated since 1931 and now are $147 a share, or a total of $98,049,735. "On the basis of present and prospective earnings the 7 per cent rate on the issue is unrealistic," he added, "and there is little, if any, likelihood of ever being able to pay the arrearage out of earnings."

Long Island. — *Reorganization.* — I.C.C. Examiner Harvey H. Wilkinson will conduct hearings, beginning December 1 in Washington, D. C., on proposed plans of reorganization for this road. One such plan has been proposed by the LI, the Pennsylvania and the American Contract & Trust Co. Another plan has been filed by the Long Island Transit Authority. This hearing will also cover any other plans which may be filed "prior to or during the hearing."

Missouri Pacific. — *Bond Interest.* —Approval has been received from the United States District Court at St. Louis to pay $12,825,325 in back interest on bonds of the Missouri Pacific and two of its subsidiaries.

Investment Publications

[The surveys listed herein are for the most part prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

Baker, Weeks & Harden, One Wall St., New York 5.

Lehigh Valley Railroad. October 1.

Pennsylvania Railroad. September 30.

Class I Railroads. Trends of Earnings, Price, Estimated Dividends and Yields. September 30.

Fahnestock & Co., 65 Broadway, New York 6.

Investment Rail Stocks. Weekly Review, October 6.

H. Hentz & Co., 60 Beaver St., New York 4.

An Analysis of the Pennsylvania Railroad. October 20.

HERE'S A TIP FROM SANTA:

"Why not give RAILWAY AGE for Christmas?"

For the railroad man with a serious professional concern in his work and future, *Railway Age* will be a most welcome and thoughtful gift. Throughout all of 1953, it will keep him up to the minute on all phases of this fascinating business of railroading.

Why not enter gift subscription orders to *Railway Age* for your railroad friends now. We will send gift notices in your name to be received at Christmas.

All orders entered will be accepted at the professional rate of $4 for 1 year . . . or $6 for 2 years—if sent *to railroad men only* in the U. S., Canada and Mexico. Rates for non-railroaders available on request.

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☐ for 1 year ☐ for 2 years
To .....
R. R. Employed by .....
Dept. .....
Title .....
Address Office ( ) Home ( ) .....
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To .....
R. R. Employed by .....
Dept. .....
Title .....
Address Office ( ) Home ( ) .....
City .....Zone .....St .....

Sign gift notice from .....
Address .....
( ) $.....remittance enclosed ( ) Send invoice to cover

Smith, Barney & Co., 14 Wall St., New York 5.

Railroad Earnings. Railroad Bulletin No. 108. October 7.

Union Pacific Railroad Company. Railroad Bulletin No. 109. October 17.

Wisconsin Central Railway Company. Railroad Bulletin No. 107. October 7.

New Securities

Application has been filed with the I.C.C. by:

CHICAGO, ROCK ISLAND & PACIFIC.—To assume liability for $4,440,000 of Series O equipment trust certificates, to finance in part 30 diesel units and 200 covered hopper cars. Estimated total cost of this equipment is $5,943,307.

	Description and Builder	Estimated Unit Cost
25	1,500-hp. general-purpose units (Electro-Motive Division General Motors Corporation)	$149,613
5	1,500-hp. general-purpose units (Electro-Motive)	160,340
200	covered hopper cars (Pullman-Standard Car Manufacturing Company)	7,006

These certificates, to be dated January 1, 1953, would mature in 24 semiannual installments of $185,000 each, beginning July 1, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

Dividends Declared

ATLANTIC COAST LINE.—$1.25, quarterly; extra, $1, both payable December 12 to holders of record November 14.

DALLAS RAILWAY & TERMINAL.—common, 35¢, quarterly; 7% preferred, $1.75, quarterly, both payable November 1 to holders of record October 17.

LOUISVILLE & NASHVILLE.—$1, quarterly; extra, 50¢, both payable December 12 to holders of record November 3.

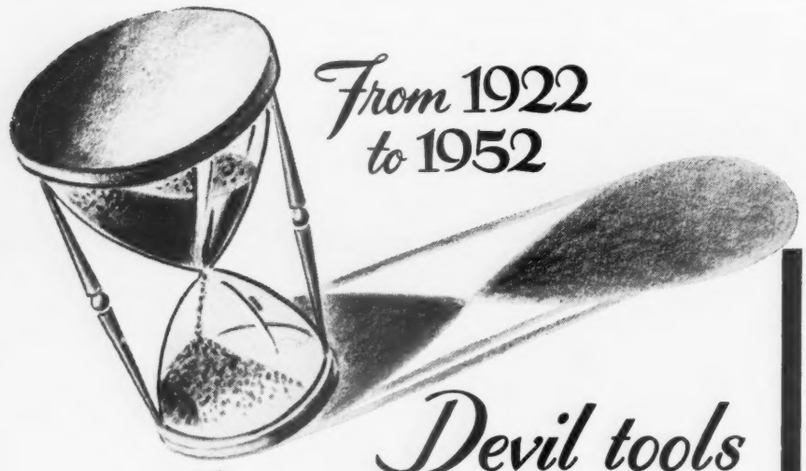
MISSOURI-KANSAS-TEXAS.—preferred, $1.25, accumulated, payable January 5, 1953, to holders of record December 15.

MONTGOMERY & ERIE.—$1.50, quarterly, payable October 31 to holders of record October 16.

NORTHERN (New Hampshire).—$1.50, quarterly, payable October 31 to holders of record October 16.

Security Price Averages

	Oct. 21	Prev. Week	Last Year
Average price of 20 representative railway stocks	62.11	62.96	54.66
Average price of 20 representative railway bonds	91.98	92.43	92.25



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Devil tools

HAVE KEPT PACE WITH THE RAILROADS' PROGRESS

CUT DEVIL SLIM PATTERN TRACK CHISEL

SLUG DEVIL PITTSBURGH (BELL) PATTERN SPIKE MAUL

OXDEVIL ALLOY HOT CHISEL

● Three decades ago Warren Tool Corporation began improving forged steel hand tools for the railroads. It was then the DEVIL line of alloy tools was introduced. The line was designed especially for the hard service required by the railway industry.

During the intervening years, knowledge has been accumulated through the study of manufacturing procedure, metallurgy, and actual physical tests. The sum total of this experience makes Warren Tool a reliable source for railway track tools. DEVIL tools are special electric furnace steel, forged and heat treated to meet A.R.E.A. standards.

Take advantage of Warren Tool's wealth of experience . . . specify DEVIL Railway Track Tools every time.

WARREN TOOL CORPORATION

Manufacturers of Warren-Teed and Devil Railway Track Tools

GENERAL OFFICES . . . Warren, Ohio

EXPORT DIVISION . . . 30 Church St., New York 7, N. Y.

RAILWAY OFFICERS

OBITUARY

R. J. Morfa, Katy Board Chairman, Dies at 58

Raymond J. Morfa, chairman of the board of the Missouri-Kansas-Texas, died on October 19 at the M-K-T hospital in Denison, Tex. Born on January 1, 1894, Mr. Morfa began his business career as a salesman for Pathe Films and later for Piersons-Taft. In 1932 he was hired by the Van Sweringen Brothers through their Allegheny Corporation as a salesman to negotiate extensions on some of their notes for

Raymond J. Morfa

the Nickel Plate. He remained with the Allegheny Corporation when it passed into the hands of Robert R. Young in 1937. He joined the M-K-T as chairman of the board on October 1, 1945, and continued to hold that position until his death. All operations on the M-K-T came to a halt on Wednesday morning, October 22, from 9:30 to 9:32 a.m. when the Katy's 10,000 employees paused for a two-minute period of silence "in memory of R. J. Morfa."